

**MISSOURI DEPARTMENT OF NATURAL RESOURCES
LAND RECLAMATION COMMISSION**

In the Matter of:)	
)	
MAGRUDER LIMESTONE CO., INC.)	Proceeding Under
Osage Beach Quarry, Miller County, Mo.,)	The Land Reclamation Act,
)	Sections 444.760 – 444.789, RSMo.
<i>Applicant,</i>)	
)	
)	Expansion of Permit # 0086
)	
LAKE OZARK – OSAGE BEACH)	
JOINT SEWER BOARD,)	
MICHAEL & JACQUELINE ATKISSON,)	
DONALD BAKER,)	
JOSEPH BAX,)	
STEVE & TERESA BEENY,)	
MARY DENTON,)	
JACK & BARBARA FARRIS,)	
JOYCE MACE,)	
CLINTON & TAMIRA SHEPPARD,)	
LARRY & VICKY STOCKMAN,)	
JUDY TAYLOR,)	
CARL WILLIAMS,)	
JOHN WILLIAMS,)	
ANDREW ZAWISLAK,)	
JOHN & MARILINE ZAWISLAK,)	
ROBERT ZAWISLAK,)	
)	
<i>Petitioners,</i>)	
)	
v.)	
)	
LARRY P. COEN,)	
Staff Director,)	
Land Reclamation Program,)	
Division of Environmental Quality,)	
)	
<i>Respondent,</i>)	

RECOMMENDED ORDER

HOLDING

Petitioners failed to establish by scientific evidence:

(1) that a hearing petitioner's health, safety or livelihood would be unduly impaired by impacts from the operation of a quarry in Bowlin Hollow, Miller County, Missouri, by Applicant; or

(2) a pattern of noncompliance at other locations in Missouri, by Applicant that suggested a reasonably likelihood of future acts of noncompliance.

The Application for Expansion of the Permit # 0086 is approved under the conditions set forth herein.

Counsels:

Applicant appeared by Counsel, Richard S. Brownlee III and Adam Troutwine, Hendren Andrae, LLC, Jefferson City, Missouri.

Petitioner Lake Ozark – Osage Beach Joint Sewer Board appeared by Counsel, Steven E. Mauer and John T. Polhemus, Bryan Cave, LLP, Kansas City, Missouri.

Individual Petitioners – appeared by Counsel, Brian E. McGovern and Ashley N. Shuttee, McCarthy, Leonard, Kaemmerer, Owen, McGovern, Striler & Menghini, LC

Respondent appeared by Counsel, Timothy P. Duggan, Assistant Attorney General, Jefferson City, Missouri

Case Heard and Recommended Order prepared by W. B. Tichenor, Hearing Officer.

IDENTIFICATION OF PARTIES

The parties are identified throughout the Recommended Order as follows:

Magruder Limestone Company:	Applicant or Magruder
Lake Ozark-Osage Beach Joint Sewer Board:	Board or Board Petitioner
Individual Petitioners:	Individual or McGovern Petitioners
Larry P. Coen:	Respondent or Coen

ISSUES

The Commission takes this appeal to determine:

(a) whether there is competent and substantial scientific evidence on the record, that a hearing petitioner's health, safety or livelihood will be unduly impaired by impacts from activities that the recommended mining permit authorizes, i.e. operation of the Bowlin Hollow – Miller County Quarry; *10 CSR 40-10.08(3)(D)*; or

(b) whether there is competent and substantial scientific evidence on the record that the Applicant has, during the period from April 18, 2002 to April 18, 2007, demonstrated a pattern of noncompliance at other locations in Missouri that suggests a reasonable likelihood of future acts of noncompliance. *10 CSR 40-10.08(3)(E)*

In the absence of the required evidence to establish one of these propositions the Application for Expansion of Permit #0086 is to be approved.

SUMMARY OF EVIDENCE

Individual Petitioners Evidence **Testimony**

Michael & Jacqueline Atkisson

3/24 Transcript 14 – 73

Petitioners Michael and Jacqueline Atkisson presented evidence in support of their case in the form of testimony by Mr. Atkisson on March 24, 2008. Mr. Atkisson testified as to his concerns if the expansion of the permit is granted to Applicant. The concerns expressed by the witness related to livelihood and safety.

Mr. and Mrs. Atkisson have begun the development of an upscale residential subdivision on land which borders on the east the 212 acres on which the Magruder quarry will be located. The developed portion of the subdivision with a pool, streets and curbing, and a club house, is located approximately a mile from where the Magruder blast plan calls for blasting to start. The Petitioners are concerned their ability to sell lots in their subdivision will be negatively impacted if the quarry is permitted to operate due to issues of noise, dust, vibration and fumes from the quarrying operation.

Concerns were also expressed as to the possible impact to the Atkisson's business in Osage Beach if sewer lines located on the Magruder property were to break as a result of the quarrying operation. Mr. Atkisson also testified regarding additional truck traffic on Woodriver Road and the dust and safety issues he perceived from this.

Mr. Atkisson testified as to his ten years of experience in work in quarrying operations and his observations as to issues related to blasting and quarrying of limestone.

Donald Baker

Petitioner Donald Baker did not testify in the proceeding or offer any exhibits into evidence.

Joseph Bax

3/24 Transcript 170 – 181

Petitioner Joseph Bax presented evidence in support of his case in the form of his own testimony on March 24, 2008. Mr. Bax was concerned that if there was a break in the sewer line crossing the Magruder property that there would be a leaching of sewage into the water table and it would pollute his well.

The Petitioner was also concerned with the increased truck traffic on Woodriver Road from the quarry operation. Mr. Bax lives on Woodriver Road.

Steve & Teresa Beeny

3/24 Transcript 159 – 169

Petitioners Steve and Teresa Beeny presented evidence in support of their case in the form of testimony by Mr. Beeny on March 24, 2008. The Beeny's live on Woodriver Road. Mr. Beeny's concern was the increase in dust from Woodriver Road due to increased traffic from the quarry operation and its impact on the Beeny's seven-year-old son, as well as Mr. Beeny. Both father and son experience breathing problems on days when more dust is generated from Woodriver Road. Neither Mr. Beeny nor his son receives treatment for their breathing conditions.

The Petitioner also was concerned relative to the increased truck traffic from the quarry creating a safety problem for the residents along Woodriver Road, as well as for the Christian School and the Senior Center which are located on the Road.

Mary Denton

3/24 Transcript 136 – 158

Petitioner Mary Denton presented evidence in support of her case in the form of her own testimony on March 24, 2008. Ms. Denton lives on Woodriver Road, approximately a quarter to a half mile from the Magruder property. The Petitioner has a lot of allergies and is asthmatic. The materials Ms. Denton is allergic to include various pollens, such as oak, grass, some flowering plants and molds. She has been under treatment for this condition for a number of years. Dust, fuel fumes, mold and chemical fumes are items that can trigger asthma/allergy

attacks for Ms. Denton. She receives an injection every two weeks for her allergies and carries an inhaler for her asthma.

Ms. Denton was concerned as to the impact on her health condition due to increased dust from quarry operation and truck traffic. The Petitioner's also testified as to her concerns relative to safety for herself and families with children due to increased truck traffic on Woodriver Road.

Jack & Barbara Farris

Petitioners Jack and Barbara Farris did not testify in the proceedings or offer any exhibits into evidence.

Joyce Mace

Petitioner Joyce Mace did not testify in the proceedings or offer any exhibits into evidence.

Clinton & Tamira Sheppard

Petitioners Clinton and Tamira Sheppard did not testify in the proceedings or offer any exhibits into evidence.

Larry & Vicky Stockman

3/24 Transcript 74 - 135

Petitioners Larry and Vicky Stockman presented evidence in support of their case in the form of testimony by Mrs. Stockman on March 24, 2008. The Stockmans live on Woodriver Road and are the owners of the Riverview RV Park (*Riverview*). Petitioners purchased Riverview in 2000 or 2001. Riverview is located on the Osage River at the approximate junction of Woodriver Road and Highway 54. It sits across the river south of an APAC quarry which has ceased operation, but did operate up until a couple of years ago. Riverview is 75 site RV park camp ground that can accommodate RVs ranging from tents to million-dollar motor homes. It operates from March 1st to November 15th of each year.

The concerns of the Stockmans with regard to the operation of the quarry relate to the blasting noise, dust and truck traffic and its potential impact on the operation of Riverview and hence their livelihood. Mrs. Stockman also testified as to her concern regarding the potential impact on Riverview if there was a break in the sewer lines on the Magruder property due to the quarrying operations.

The Stockmans advertise Riverview in trade directories. RV park trade directories give ratings to RV parks based on a variety of factors. Petitioners believe the rating for Riverview will be lowered due to the existence of the Magruder quarry.

Judy Taylor

Petitioner Judy Taylor did not testify in the proceedings or offer any exhibits into evidence.

Carl Williams

Petitioner Carl Williams did not testify in the proceedings or offer any exhibits into evidence.

John Williams

Petitioner John Williams did not testify in the proceedings or offer any exhibits into evidence.

Andrew Zawislak

Petitioner Andrew Zawislak did not testify in the proceedings or offer any exhibits into evidence.

John & Mariline Zawislak

Petitioners John and Mariline Zawislak did not testify in the proceedings or offer any exhibits into evidence.

Robert Zawislak

4/28 Transcript 7 - 29

Petitioner Robert Zawislak presented evidence in support of his case in the form of his own testimony on April 28, 2008. The Petitioner's concern dealt with his part-time woodworking and refinishing business and dust from the road and the quarry migrating to the outdoor work area where he applies finish to furniture items. Concern was also expressed relative to the increased truck traffic on Wood River Road as a result of the operation of the quarry.

Individual Petitioners Evidence
Exhibits

The following exhibits were received into evidence on behalf of the Individual Petitioners.

EXHIBIT #	DESCRIPTION
MP – 1	Quarry Map
MP – 2	Photographs of Atkisson Development
MP – 3	2007 Trailer Life Directory – Cover and 5 pages
MP – 5	Magruder Cover Letter (4/18/07), Permit Application, LRC letter to run public notice (5/14/07), Affidavit of Publication, Bond, Certified Mail Receipts
MP – 15	Magruder Notice of Violations Spreadsheets
MP – 16	Notice of Violation (NOV) 2640SL – 5/6/03
MP – 17	Settlement Agreement – NOV 2640 SL
MP – 18	State Inspection Form – NOV 2640 SL
MP – 19	Note dated 5/15/03 – suggesting settlement offer and referencing a violation and emission on 6/26/02

MP – 20	NOV 0404 CJ01 – 4/12/04
MP – 21	Notice of Excess Emissions (NOEE) 2111 SL -4/2/04
MP – 22	NOEE 2114 SL – 4/13/04
MP – 23	NOV 2112 SL – 4/2/04
MP – 24	NOV 2113 SL – 4/2/04
MP – 25	Inspection Form for NOV’s 2111 SL, 2112 SL, 2113 SL & 2114 SL
MP – 26	NOEE 2105 SL – 3/10/04
MP – 27	Email from Air Pollution Control Program – NOEE 2105 SL – 4/20/04
MP – 28	Report on the Inspection of Magruder Limestone Co., Inc. – Troy Facility – 4/27/04 – NOEE’s – 2111 SL & 2114 SL; NOV’s – 2112 SL & 2113 SL
MP – 29	Settlement Agreement and Memorandum – 2004 NOV’s
MP – 30	Letter from Dean McDonald regarding NOV’s 2416 & 2415
MP – 31	NOV 2415 – 6/26/02
MP – 32	NOV 2416 – 6/26/02
MP – 33	Inspection Form for Troy Quarry – NOV’s 2415 & 2416
MP – 34	NOV 25BN1 AP – 2/3/05
MP – 35	MDNR – LRC – Staff Director Coen’s Recommendation – 7/13/07

Petitioner Joint Sewer Board’s Evidence

Testimony

Fact-Witnesses

Alfred Bisogno

5/30 Transcript 21 – 50

Mr. Bisogno testified concerning a two-story rental house located approximately 600 feet from the edge of a quarry located at Sunrise Beach, Missouri. He also owns a business building located 1,200 to 1,500 feet from the quarry. Mr. Bisogno purchased his property in 2003, when there was not an active quarry in operation across the street. He testified as to cracks in the floors and foundation of the rental house, in ability to open or difficulty in opening and closing some doors, a shifting of the house off its foundation, pulling of electrical wires and plumbing out of walls, damage to roof, buckling of a basement wall, and collapse of the walls of an in-ground air-conditioning well system.

Joyce Sallach

5/30 Transcript 50 – 66

Ms. Sallach lives approximately 400 feet from the west boundary of the Sunrise Beach quarry and 600 – 800 feet from where the quarry was operating in mid-2008. She testified concerning a break in her water line from her well to her house that she discovered around November 20, 2007. The break was in a PVC pipe (*Exhibit 52*) located about 2 or 3 feet from the

Sallach house and buried about 30 inches in the ground. Ms. Sallach also testified that her home has cracks in the basement and foundation walls. The witness also testified as to the condition of the road that services the quarry and the truck traffic on the road due to the quarrying operation.

Barbara Jean Robinson

5/30 Transcript 67 – 82

Ms. Robinson lives approximately 1,200 feet north of the Sunrise Beach Quarry and she operates a business (*selling automobiles and customized golf carts*) across the street, approximately 250 feet from the quarry. Ms. Robinson has experience dust from the quarry accumulating on the cars and golf carts parked on her business property. She testified she could feel the floor of her business building and house shaking when blasting is done. She also testified to some cracking in the walls of her home. Other testimony related in general to her dealings with the Magruder Company and Mark Magruder relative to her complainants on the blasting at the quarry.

Richard C. King

4/29 Transcript 250 – 282

4/30 Transcript 140 - 197

Mr. King is the Public Works Superintendent for Osage Beach. His testimony provided an overall description of the Osage Beach Sewer System and its design and operation. He discussed what would occur in the event of a break in a line and what would be required to clean up a spill if a line ruptured. He testified relative to breaks in a sewer line in 1995 and 1999. Neither break was a result of a blasting operation.

The 1999 break was due to excavation of the ground to one side of an 18 inch PVC main. The supporting earth was removed to within a couple of feet of the pipe resulting in the pipe bulging out and coming apart at a joint. The 1995 incident was apparently due to large rock having been placed in a low spot on top of a PVC line.

Mr. King presented no scientific evidence to establish that the operation of the quarry would result in a break in either the ductile iron or PVC sewer lines that run across the Magruder land.

Gary F. Hutchcraft
4/30 Transcript 10 – 101

Mr. Hutchcraft is the Manager for Alliance Water Resources at the Lake Ozark – Osage Beach Joint Sewer Board Sewage Treatment Plant. He provided a detailed explanation as to operation of the Plant and the various equipment involved in processing the sewage.

Mr. Hutchcraft presented no scientific evidence to establish that the operation of the quarry would result in damage to the sewage treatment plant.

Greg Gognan
4/30 Transcript 102 – 138

Mr. Gognan is the president of Central Bank of Lake of the Ozarks. His testimony related to the economic growth and development of Osage Beach and Lake Ozark. It was Mr. Gognan's opinion that sewage spilling into the Osage River would be devastating to the local economy.

Mr. Gognan presented no scientific evidence to establish that the operation of the quarry would result in sewage spilling into the Osage River or the Lake of the Ozarks.

Nicholas L. Edelman
4/30 Transcript 199 – 231

Mr. Edelman is the city engineer for the City of Osage Beach. He testified as to the lack of specific information regarding various aspects of the construction of the sewer lines that run across the Magruder property.

Mr. Edelman presented no scientific evidence to establish that the operation of the quarry would result in a rupture of either the ductile iron or the PVC mains crossing the Magruder property.

Penny A. Lyons
4/30 Transcript 233 - 258

Ms. Lyons is the Mayor of Osage Beach. By virtue of her position as Mayor she serves on the Lake Ozark – Osage Beach Joint Sewer Board. Every other year the Mayor of Osage Beach serves as the Chairman of the Board.

Mayor Lyons testified about the development of Osage Beach and the importance of the sewage treatment plant to the city's development. It was the Mayor's opinion that a break in the

sewer lines running across the Magruder property would have an incalculable impact on the health, safety and livelihood of the citizens and businesses of Osage Beach and Lake Ozark.

Mayor Lyons presented no scientific evidence to establish that the operation of the quarry would result in a rupture of either the ductile iron or the PVC mains crossing the Magruder property. She presented no scientific evidence to establish that the operation of the quarry would result in damage to the sewage treatment plant.

Expert Witness
Donald E. Dressler, P.E.
Dressler Consulting Engineers Inc.
6/6 Transcript 6 - 280

Mr. Dressler is a Registered Professional Engineer with forty-five years of experience. He holds a Bachelor of Science in Civil Engineering, a Master of Engineering and is a Fellow with the American Society of Civil Engineers. *Exhibit BP-24.*

The witness testified concerning his review (*Exhibit BP-23*) of the Magruder Blast Plan. Mr. Dressler's review addressed the following areas of concern: Environmental Impacts, Karst Topography, Impact on Pipelines and Sewer Plant. He opined that the Bowlin Hollow site was not a suitable candidate for development of a quarry for reasons of: sensitive environmental impact and insufficient distance setback for the sewer lines and the sewer plant. Mr. Dressler further opined the Magruder Blast Plan was incomplete and relied on faulty and misleading information. He concluded "The safety of the force main lines and treatment facility can not be guaranteed with an active of (*sic*) quarry in such close proximity." *Exhibit BP-23, p. 7.*

Mr. Dressler's testimony was presented in conjunction with a PowerPoint slide presentation – Exhibit BP-25. He challenged what he described as voluntary safety features in the Magruder blast plan. His testimony relative to Exhibit BP-25 also addressed issues of Vibration, Settling of Bedding, Fatigue Fracture, Karst Geology, and Environmental Impacts. Mr. Dressler concluded that the Magruder blast plan was unrealistic, unregulated, unenforceable, and designed to be modified.

It was the professional opinion of Mr. Dressler that both the ductile iron and the PVC pipes which cross the Magruder property at the Bowlin Hollow site had a zero tolerance standard for vibrations.

Petitioner Joint Sewer Board's Evidence

Exhibits

The following exhibits were received into evidence on behalf of Petitioner Joint Sewer Board.

EXHIBIT #	DESCRIPTION
BP – 1	Letter to Dean McDonald from Larry Coen – Permit Application – 6/21/07 Response Letters from Larry Coen to individuals 6/26,7/3, 7/17, 8/30 - 2007
BP – 2	Public Comment Letters
BP – 3	Coen Memorandum to Land Reclamation Commission – 7/13/07
BP – 6	Mo Dept. of Conservation – East Osage River Watershed – Executive Summary
BP – 7	Minutes of Lake of the Ozarks – LOWA meeting 7/16/07
BP – 8	US Geological Survey Open File Report – Potential Environmental Impacts of Quarrying Stone in Karst – A Literature Review – 2001
BP – 16	Correspondence between Richard Laux, Senior Technical Support, Mo. DNR and the City Administrators of Osage Beach and Lake Ozark – RE: NPDES Permit – 3/19 & 3/31 – 2005
BP – 18	Title Documents for Eolia Development Corp. on Miller County Quarry land
BP – 22	Osage Beach Sewer System Map
BP – 23	Report by Donald G. Dressler, PE on the Mine and Blast Plan, prepared by Dr. Paul Worsey for Magruder Limestone
BP – 24	Vita for Donald G. Dressler
BP – 25	PowerPoint Presentation for testimony of Donald G. Dressler
BP – 26	Alliance Water Resources Report of Operations Jone Wastewater Treatment Plant No. 1, with photographs of Wastewater Treatment Plant No. 1
BP – 33	Notice of Cancellation or Non-Renewal, Alfred Bisogno, 6/16/05
BP – 35	Letter from Cynthia M. Davenport, Attorney to Joyce Sallach, 1/23/08
BP – 43	Missouri Blasting Safety Act
BP – 51	Detail Map, date stamped 2/1/08 – Mo. LRC
BP – 52	Section of Joyce Sallach’s broken PVC waterline pipe
BP – 53	Revised Blasting Plan of Dressler Consulting Engineers - Kansas City, Missouri Construction Project
BP – 54	Report of Investigation/1994 – Surface Mine Blasting Near Pressurized Transmission Pipelines, U. S. Dept. of Interior, Bureau of Mines
BP – 55	Shot Diagram

Respondent’s Evidence

Testimony

4/28 Transcript

Testimony was presented on behalf of Respondent by Mitchell W. Roberts, Environmental Specialist III, Land Reclamation Program (*LRP*) (*4/28/08 Tr. 33 – 126*); William S. Zeaman, Chief of Non-Coal Unit, *LRP* (*4/28/08 Tr. 130 – 218*) and Larry P. Coen, Staff

Director, Land Reclamation Commission. (4/28/08 Tr. 220 – 261). The testimony of these witnesses related to the application process of the LRP and the process with regard to the Magruder application in the present proceeding.

Respondent's Evidence
Exhibit

The following exhibit was received into evidence on behalf of Respondent.

EXHIBIT #	DESCRIPTION
RP – 1	MDNR-LRC Emails and documentation regarding MDNR Compliance History for Magruder Limestone Company, Inc. for the five years preceding the filing of the Application for Expansion of Permit # 0086

Applicant's Evidence
Testimony

Dr. Paul Worsey, PhD
Professor – Missouri University of Science and Technology
5/23 Transcript 85 - 331

Dr. Worsey has a Bachelor of Science in Applied Geology, a Master of Science in Rock Mechanics Excavation and Engineering and a Doctor of Philosophy. He is a Chartered Engineer in the United Kingdom (*equivalent to a professional engineer in the United States*). He has a Missouri Limestone Producers Association license and is a member of the International Society of Explosive Engineers. Dr. Worsey has published over 120 scholarly works pertaining to blasting. *Exhibit APP-21*. His engineering specialty is in blasting. He has over 27 years of blasting experience.

Dr. Worsey testified as to the blast plan (*Exhibit APP-7 – Worsey Blast Plan*) which he developed for Magruder for use at the Bowlin Hollow quarry site. His testimony was given in conjunction with a PowerPoint slide presentation – Exhibit APP-8.

Dr. Worsey gave extensive testimony regarding blasting in close proximity to buried pipelines. His conclusions and opinions were drawn from his personal experience as well as review of recognized studies on blasting near pipelines. It was Dr. Worsey's expert opinion that the operation of the proposed quarry as outlined in the blast plan, with blasting no closer to the sewer plant than 700 feet and no closer than 150 feet to the sewer lines (*the distances from the*

quarrying zones to the plant and lines in the blast plan) would not have undue affect on the pipelines or sewage treatment facility. 5/23 Tr. 192:12-16.

Dean A. McDonald
Vice-President – Magruder Limestone Co., Inc.
4/29 Transcript 7 – 248

Mr. McDonald has been with Magruder since August, 1998. In his position as vice-president his basic duties involve management of the company. He is the person responsible for permit applications with MDNR. He testified as to his involvement in preparing the application for the permit expansion and his general over-site of the day-to-day operations of the company. Mr. McDonald understood that the application as submitted and the locator and detail maps were in proper order under the guidelines, policies and practices of the LRP when submitted on April 18, 2007. When requested he submitted a supplemental detail map identifying the Ameren UE and Osage Beach easements.

Lawrence J. Mirabelli
Senior Technical Consultant – Dyno Consult Group
6/4 Transcript 7 – 159

Mr. Mirabelli holds a Bachelor of Science in Chemical Engineering. He has 34 years experience as an explosive engineer in research and development and explosive applications. He is a member of the International Society of Explosive Engineers and a certified trainer for the United States Mine Safety and Health Administration.

Mr. Mirabelli has extensive experience in blasting projects in close proximity to power plants, buildings and utilities. He has over 20 years blasting experience involving close proximity to pressurized pipelines. His testimony was given in conjunction with his report on the proposed Bowlin Hollow quarry site and the blast effect on sewer lines – Exhibit APP-9.

Testimony addressed a number of cases in which blasting occurred within less than 50 feet, in some instances as close as 7.5, 12 or even 20 feet at PPV (*Peak Particle Velocity*) of 5, 12 or even 24 ips (*inches per second*) without damage to the pipeline. In his years of blasting experience he has never seen a pipeline damaged by blast vibrations.

Mr. Mirabelli concluded based on the overall mine/blast plan, the sewer lines and the sewage plant are located sufficiently far away from the proposed blasting so as not to be adversely affected. Blasting for the development of the Bowlin Hollow quarry per the Worsey

mine plan is compatible with the buried pipelines on the easement crossing the Magruder property. *Exhibit APP-9, pp. 36-37*. It was Mr. Maribelli's opinion based upon a reasonable degree of explosive engineer certainty that the distance provided in the blast plan from the blasting activity to the sewer lines and the sewer plant is sufficient to not adversely affect the sewer lines or plant. *6/4 Tr. 105:18 – Tr. 106:12*

Keith Henderson
Technical Sales Manager – Dyno Nobel
6/4 Transcript 160 – 305

Mr. Henderson has a BS in Economics. He has 16 years of blasting experience. He is a Missouri Licensed Blaster. He holds memberships in the International Society of Explosive Engineers, the Mississippi Valley International Society of Explosive Engineers, the Missouri Limestone Producers Association and the Illinois Association of Aggregate Producers. He is Chairman of the Missouri Blasting Safety Board and teaches course on blasting.

The testimony of Mr. Henderson was supplemented by his report – Exhibit APP-10. He testified as to the Missouri Blasting Safety Act and the ground vibration limit set by the act for uncontrolled structures at 2 inches per second. This is the level that is safe for materials, such as plaster and drywall. In his experience he knew of no damage that had occurred to pipelines due to vibrations.

Mr. Henderson concluded that the vibrations from blasting are not allowed to exceed the state limits at the closest non mine structure and that the limits provided by the state are far more restrictive as to vibration levels which would damage pipe and as such, the blasting vibrations at the Bowlin Hollow quarry will not damage the sewer pipes, the concrete sewer basins or the other sewer plant structures.

Applicant's Evidence
Exhibits

The following exhibits were received into evidence on behalf of Applicant.

EXHIBIT #	DESCRIPTION
APP – 2	10 Code of State Regulations, Division 40, Chapter 10
APP – 3	Sections 444.760 – 444.790 RSMo – The Land Reclamation Act
APP – 4	June 2007 – Affidavit of Publication
APP – 5	Certified Mail Receipt and letter to Miller County Commissions from Magruder

APP – 6	Bonding Amendment Materials, with Cover Letter, 2/5/08
APP – 7	Mine and Blast Plan, Magruder Quarry, Lake Ozark, Aerial Map, Topographical Map and Geological Map
APP – 8	PowerPoint Presentation for Expert Report of Dr. Paul Worsey
APP – 9	PowerPoint Presentation for Expert Report of Larry Mirabelli
APP – 10	PowerPoint Presentation for Expert Report of Keith Henderson
APP – 18	Magruder Limestone History of Noncompliance with Environmental Laws Administered by the MDNR – 4/18/02 – 4/18/07
APP – 19	A.C. Kirkwood & Associates – 18” Sewer Main Diagram – Revised in Accordance with Construction Records
APP – 20	E. T. Archer Corp – 24” Sewer Main Construction Report and Diagram
APP – 21	List of Publications by Dr. Paul Worsey
APP – 22	American Gas Association – Pipeline Response to Buried Explosive Detonations, August, 1981
APP – 25	Aerial Photograph Jefferson City Capitol Quarry – Stadium Location
APP – 26	List of Blasting Projects of Donald G. Dressler
APP – 28	MoDOT Highway 54 Relocation Map – Osage Beach
APP – 29	MoDOT Highway 54 Relocation Project Excavation Cross Section
APP – 30	City of Osage Beach, Blasting Permit, Passover Road Interchange 11/28/07 – 11/28/08
APP – 31	Photograph of 16” Ductile Pipe under Grand Glaze Bridge, Osage Beach

FINDINGS OF FACT

Procedural History

The procedural history of the Matter is as follows (*date given for attorney’s filing of a document is the date shown on the Certificate of Service for the document*):

1. On April 23, 2007 an Application filed by Magruder for expansion of permit # 0086 was received by the Land Reclamation Program.
2. On May 14, 2007, the Land Reclamation Program by certified letter, instructed Magruder to publish the public notice and send any required certified letters.
3. On May 17, 2007, the first public notice was published in The Miller County Autogram-Sentinel, notice was subsequently published on May 24th, 31st and June 7, 2007.
4. On June 15, 2007, the Land Reclamation Program began receiving letters from Petitioners requesting a public meeting and/or formal hearing.
5. On June 20, 2007, Magruder informed the Land Reclamation Program it declined to hold an informal public meeting.

6. On June 26, 2007, the Land Reclamation Program sent letters to the public who had requested an informal public meeting or provided comments advising Magruder declined to hold informal meeting. The letter indicated the Petitioners had an additional 15 days to request a formal hearing be held.
7. On July 3, 2007, the Land Reclamation Program sent letters to the public who had responded to the June 26th letter, indicating their requests would be heard by the Land Reclamation Commission at their meeting on September 27, 2007
8. On July 16, 2007, Land Reclamation Commission Staff Director Larry P. Coen issued a memorandum with Notice of Recommendation and Attachment 1, Response to Public Comments Regarding the Proposed Permit Expansion Application for Magruder Limestone Company, Inc., Miller County, Missouri.
9. On September 10, 2007, William S. Zeaman of the Land Reclamation Program, issued a memorandum detailing the hearing request concerning the Permit Expansion sought by Magruder.
10. On September 27, 2007, the Land Reclamation Commission addressed the hearing requests and granted request for a formal hearing.
11. On October 1, 2007, William S. Zeaman emailed Larry P. Coen relative to the requirements of 444.773 to check with all other regulatory programs within the Missouri Department of Natural Resources to look at the history of violations issued between the dates of April 23, 2002 to April 23, 2007.
12. On October 16, 2007, Hearing Officer W. B. Tichenor issued Notice of Appointment of Hearing Officer and Order Setting Prehearing Conference for 7:00 p.m., Tuesday, November 20, 2007 at the City Hall of Osage Beach, Missouri.
13. On November 21, 2007, Prehearing Conference was held at the City Hall, Osage Beach Missouri. On November 28, 2007, Post Pre-Hearing Conference Order addressing issues presented and discussed at the Prehearing was issued. Parties were ordered to file Witness Lists by December 21, 2007.
14. On December 18, 2007, Respondent filed his Witness List.
15. On December 20, 2007, Applicant filed Brief on Collateral Issues, Witness List and proposed Discovery Scheduling Order.
16. On December 20, 2007, Board filed Witness List and proposed Discovery Scheduling Order.
17. On December 21, 2007, McGovern Petitioners filed Witness List for the Individual Petitioners.

18. On December 22, 2007, Discovery Scheduling Order was issued and Order for Filing of Written Direct Testimony by Pro Se Petitioners – Donald Baker, Steve and Teresa Beeny, Dennis and Linda Croxton, Jack and Barbara Farris, Kevin and Judith Meyer, Mr. And Mrs. William Moore, Todd and Rebecca Reinecke, Steve Terviel, Jerry Vincent and Linda Weeks – was issued.
19. On December 28, 2007, Memorandum on Filing of Documents at Osage Beach City Hall was issued, in order that documents might be available for review by the Pro Se Petitioners.
20. On January 9, 2008, Respondent filed Response to Brief on Collateral Issues and the Board filed Response to Brief on Collateral Issues.
21. On January 14, 2008, Order on Trial Dates was issued.
22. On January 23, 2008, McGovern Petitioners filed Motion to Add Petitioners.
23. On January 24, 2008, Applicant filed Reply Brief on Collateral Issues.
24. On January 28, 2008, Decision and Order Ruling on Collateral Issues was issued and ordered as follows:

“The issue of the potential impact on the safety of the sewer line and plant is properly a matter that can be considered relative to issuance or denial of the requested permit as an impact within the authority of environmental law or regulation administered by the Missouri Department of Natural Resources. *10 CSR 40-10.080(2)(B)*.

The issues of the potential impact on the health, safety or livelihood of the individual petitioners based upon noise pollution, traffic, dust outside the mining site, blasting activities, property devaluation and potential impact on businesses in the area where the quarry will be located are not matters which can be considered relative to issuance or denial of the requested permit as an impact within the authority of environmental law or regulation administered by the Missouri Department of Natural Resources. *10 CSR 40-10.080(2)(B)*.

Any proffered testimony and documents from individual petitioners on the matters of noise pollution, traffic, dust outside the mining site, blasting activities, property devaluation and potential impact on businesses will only be received to maintain the record as an offer of proof and not as evidence upon which a decision could be rendered on the underlying issue of granting or denying the requested permit.”

25. On January 28, 2008, Order Denying Motion to Add Petitioners was issued.

26. On February 4, 2008, Applicant filed Motion to Require Simultaneous Exchange of Expert Reports.
27. On February 7, 2008, the Board filed Opposition to Motion to Require Simultaneous Exchange of Expert Reports and Applicant filed Response to Opposition.
28. On February 8, 2008, Applicant filed Mine and Blast Plan, consisting of (1) Mine and Blast Plan Report, Dr. Paul Worsey; (2) Aerial photograph of Joint Sewer Plant and Applicant's proposed mine site, APAC permitted mine site, sewer line and Woodriver Road designated on photograph; (3) Topographical Map of Bagnell 7.5 Minute Quadrangle, with proposed mine site highlighted; and (4) Bedrock geological map of Bagnell 7.5 Minute Quadrangle, showing proposed mine site.
29. On February 9, 2008, Order Dismissing Certain Individuals as Petitioners and Changing Citation of Case was issued. Pro Se Petitioners Linda Weeks, Jerry Vincent, Dennis & Linda Croxton, Todd & Rebecca Reinecke, Mr. & Mrs. William Moore, Kevin & Judith Meyer and Steven Terviel were dismissed for failure to attend the Prehearing Conference, failure to file witness lists as ordered, failure to file written direct testimony and supporting documents as ordered. The Citation of the Petitioners for this case was changed to: LAKE OZARK – OSAGE BEACH JOINT SEWER BOARD, et al.
30. On February 10, 2008, Order Granting Motion to Require Simultaneous Exchange of Expert Reports was issued.
31. On March 4, 2008, Petitioner Board filed Motion to Dismiss, with Suggestions. Order for Response to Motion to Dismiss was issued.
32. On March 6, 2008, Order for Submission of Proposed Stipulation of Uncontested Facts by Respondent was issued.
33. On March 9, 2008, Order for submission of Proposed Stipulation of Uncontested Facts by Application, Petitioner Board and McGovern Petitioners was issued.
34. On March 12, 2008, Applicant filed Notice to Take Depositions of Robert Wayne Cooper, Rodney Schad and Doyle Childers. Motions to Quash Subpoenas were filed by Robert Wayne Cooper and Rodney Schad.
35. On March 13, 2008, Applicant filed Responses to Motions to Quash.
36. On March 14, 2008, Order Granting Motions to Quash Subpoenas was issued.
37. On March 14, 2008, Respondent filed Motion to Quash Subpoena of Doyle Childers and Motion for Protective Order.

38. On March 16, 2008, Order Granting Motion to Quash Subpoena of Doyle Childers and Motion for Protective Order was issued.
39. On March 19, 2008, Respondent filed Proposed Stipulation of Uncontested Facts.
40. On March 20, 2008, Applicant filed Response to Motion to Dismiss and Amended Witness List.
41. On March 21, 2008, Order Denying Motion to Dismiss was issued. Said Order is incorporated by reference into this Recommended Order as if set out in full herein.
42. On March 24, 2008, Petitioners Larry and Vicky Stockman filed Motion in Limine and Applicant filed Response. Matter was taken up by the Hearing Officer prior to the convening of the formal public hearing (*evidentiary hearing*). Parties provided oral argument on the Motion.
43. On March 24, 2008, an evidentiary hearing was held to receive evidence from Petitioners Michael Atkisson, Vicky Stockman, Mary Denton, Steve Beeny and Joseph Bax on their case in chief.
44. On March 25, 2008, Order Denying Motion in Limine was issued.
45. On April 1, 2008, Petitioner Board filed Report of Donald G. Dressler, P. E. in response to Applicant's Mine Plan.
46. On April 3, 2008, Petitioner Board and Concerned Citizens of Miller and Camden County, LLC filed a Joint Motion for Reconsideration of Motion to Dismiss. Order Denying Motion for Reconsideration as to Concerned Citizens of Miller and Camden County, LLC and Granting Motion for Reconsideration as to Petitioner Board was issued.
47. On April 4, 2008, Order for Submission of Memoranda on Application process was issued. Hearing Officer received the Applicant's Memorandum and the Board Petitioner's Memorandum on April 22nd. Respondent filed his Memorandum on April 28th.
48. On April 9, 2008, Order on Evidentiary Hearing Schedule was issued. Petitioner Board filed its Amended Witness List. McGovern Petitioners, Applicant and Petitioner Board filed their Exhibit Lists.
49. On April 22, 2008, Order on Revised Evidentiary Hearing Schedule was issued.
50. On April 22, 2008, Order on Petitioners' Stockman RV Park was issued.
51. On April 28, 29 and 30, 2008, Evidentiary Hearing was held in the Nightingale Room, Lewis and Clark State Office Building, Jefferson City, Missouri.

52. On April 30, 2008, Order Setting Hearing Dates was issued.
53. On May 15, 2008, Petitioners filed Joint Motion to Exclude Testimony of Applicant's Expert Witness – Lawrence Mirabelli.
54. On May 19, 2008, Order Denying Joint Motion to Exclude Testimony of Lawrence Mirabelli was issued.
55. On May 22, 2008, Board Petitioners filed Joint Motion to Dismiss or, In the Alternative, for Leave to Add Parties.
56. On May 23, 2008, Evidentiary Hearing was held in the Bennett Springs Room, Department of Natural Resources Building, 1730 Elm Street, Jefferson City, Missouri.
57. On June 4, 2008, Evidentiary Hearing was held in the Roaring River Room, Department of Natural Resources Building, 1730 Elm Street, Jefferson City, Missouri.
58. On June 6, 2008, Evidentiary Hearing was held in the Roaring River Room, Department of Natural Resources Building, 1730 Elm Street, Jefferson City, Missouri.
59. On June 12, 2008, Respondent filed Response to Petitioners' Joint Motion to Dismiss and Alternative Motion to Add Parties.
60. On June 16, 2008, Applicant filed Response to Petitioners' Joint Motion to Dismiss or, in the Alternative, For Leave to Add Parties.
61. On June 18, 2008, Board Petitioner filed Deposition Designations.
62. On June 19, 2008, Petitioners filed Joint Reply to Applicant's Response to Motion to Dismiss or For Leave to Add Parties.
63. On June 23, 2008, Order Rejecting Submission of Deposition Designations was issued.
64. On June 25, 2008, Petitioners filed Joint Motion to Strike. Order on Motion to Strike, permitting response from Applicant and Respondent was issued.
65. On June 25, 2008, Petitioners filed Joint Motion for Reconsideration of Board Petitioner's Deposition Designations.

66. On June 26, 2008, Applicant filed Response to Petitioners' Joint Motion for Reconsideration of Petitioner's Deposition Designations and Response to Petitioners' Joint Motion to Strike.
67. On June 29, 2008, Order Denying Motion for Reconsideration of Petitioner Joint Sewer Board's Deposition Designations was issued.
68. On June 30, 2008, Order Denying Motion to Strike was issued.
69. On July 2, 2008, Petitioners filed Joint Recommended Findings of Fact and Conclusions of Law, Respondent filed Post-Hearing Brief, and Applicant filed Post-Trial Brief.
70. On July 7, 2008, Petitioners filed Joint Motion to Strike (*Applicant's and Respondent's Post-Trial Briefs*) or in the Alternative Leave to File a Post-Trial Brief. Applicant filed Response to the Joint Motion/Alternative Motion.
71. On July 8, 2008, Order Denying Joint Motion to Strike and Alternative Motion was issued.

Specific Findings of Fact

72. ***Applicant*** – Applicant is Magruder Limestone Co., Inc. Its headquarters are located in Troy, Missouri. The company operates six other quarries in Missouri. Those quarries are located at Troy, Silex, Frankfort, Ashley, Bowling Green and Sunrise Beach. All of the Magruder quarries, except for Sunrise Beach, are operated under Land Reclamation Permit # 0086. Sunrise Beach is permitted by the land owner, Harry Adrian. It is operated by the Applicant.

73. ***Petitioners*** – Petitioners are the 21 individuals set forth in the caption of this Recommended Order and the Osage Beach-Lake Ozark Joint Sewer Board.

74. ***Respondent*** – Respondent is Larry P. Coen, the Staff Director, Land Reclamation Program, Division of Environmental Quality, Missouri Department of Natural Resources.

75. ***Bowlin Hollow Quarry*** – Applicant seeks an expansion of Permit # 0086 to operate a quarry in Miller County, off of Woodriver Road, on a tract of land of approximately 212 acres, owned by Eolia Development. The proposed mining site is setback from the boundaries of the Eolia land a distance of fifty (50) feet, resulting in the area to be mined to be

approximately 205 acres, subject to a sewer line easement running north and south over the tract, held by the City of Osage Beach. The beginning of quarrying in accordance with the mine and blast plan developed for the site will be near a location identified as Bowlin Hollow. *Exhibit MP-35; Exhibit APP – 7.*

76. **Sewer Lines** – There is one 24-inch ductile iron pipe and one 18-inch PVC pipe running in a thirty foot wide easement across the property on which Magruder proposes to operate the Bowlin Hollow quarry. *Exhibit MP-1; Exhibit BP-22.* The City of Osage Beach holds the easement for these sewer lines. The easement grants no interest in the land proposed to be mined by Applicant. The easement only grants a right to use the 30 foot wide strip of land for the specific purpose of maintaining the sewer lines. By the terms and nature of the easement the Applicant cannot excavate or otherwise utilize the land contained within the easement in any manner that would interfere with the City of Osage Beach's right to maintain its sewer lines. *Exhibit BP – 18 – Sewer Line Easement.*

Ductile iron, also called ductile cast iron or nodular cast iron, is a type of cast iron invented in 1943 by Keith Millis. While most varieties of cast iron are brittle, ductile iron is much more ductile (*easily molded, pliant*), due to its nodular graphite inclusions. Much of the annual production of ductile iron is in the form of ductile cast iron pipe, used for water and sewer lines. Ductile iron pipe is stronger and easier to tap, requires less support and provides greater flow area compared to pipe made from other materials. In difficult terrain it can be a better choice than PVC, concrete, polyethylene or steel pipe. *Wikipedia – Ductile Iron.*

Polyvinyl chloride commonly abbreviated PVC, is a widely used thermoplastic polymer. It is used in a variety of applications. As a hard plastic, it is used as ... pipe, plumbing and conduit fixtures. The material is often used in Plastic Pressure Pipe Systems for pipelines in the water and sewer industries because of its inexpensive nature and flexibility. Its light weight, high strength, and low reactivity make it particularly well-suited to water distribution and sanitary sewer pipe applications. *Wikipedia – Polyvinyl chloride.*

77. **Sewer Plant** – The Joint Sewer Board's waste water treatment facility is located north of the proposed Bowlin Hollow quarry site. The Plant is at a distance of at least 700 feet from the three zones for quarrying set forth in the Worsey mining and blast plan. *Exhibit MP-1; Exhibit BP – 22; Exhibit APP-7.* The plant has two oxidation basins made of reinforced concrete

extending 15 to 20 feet beneath the ground and other related structures above and below ground ordinarily associated with a waste water treatment facility. *Exhibit BP-26*. The plant is an uncontrolled structure within the meaning of the Missouri Blasting Safety Act. §319.303(25) RSMo

78. ***Blast Plan*** - The Worsey Blast Plan (*Plan*) establishes three zones of mining for the initial development of the quarry. These three zones are all located to the west of the sewer lines crossing the Magruder property. Zones A and B lie between Bowlin Hollow and the sewer lines. Zone C is a hillside east of Bowlin Hollow. The three initial mining zones lie to the south of the Sewer Plant a distance of approximately 700 feet. Buffering the sewer plant from mining zones A and B is a ridge that extends to an elevation in excess of 100 feet above the elevation of the sewer plant. The ridge commences at a highwall due south of the sewer plant and just across the access road, it then continues to the south to the property line of the Eolia property.

The Plan addressed three main items of interest for protection. These are: residential structures mainly to the west and south, the Joint Sewer Board Sewer Plant and the Osage Beach sewer lines.

The mining in zones A and B will involve the quarrying of a hillside or ridge that slopes to the North. The ridge runs from a height from 100 to approximately 140 feet above the proposed bottom of the quarry. This is an elevation designed to be approximately 6 feet above the creek bottom of Bowlin Hollow. The quarrying will have to be benched in heights of 50 feet, 2 benches on the north end and 3 benches at the south end.

The Plan provides for both dry and wet hole design. It provides for a 150 foot setback from the pipe lines and rotation of the firing geometry of the blast and firing sequence so that the back pressure can be exerted toward the quarry rather than towards the pipelines or the sewer plant. Vibration levels will be recorded through the use of multiple seismographs located at residential structures, the sewage plant and along the pipeline. The Plan can be modified based upon the history of seismic readings to address issues related to the safety of the pipelines.

Blasting in the three zones will generally move away from the treatment facility and toward the pipelines. However, it is estimated it will take approximately ten (10) years before blasting will reach to within 150 feet of the sewer line easement. The entire quarrying of zones

A, B & C is estimated to take 20 to 30 years. *Exhibit APP- 7; Exhibit APP-8; 5/23 Transcript 85 – 331-Worsey Testimony*

Individual Petitioners

79. ***Petitioners Michael & Jacqueline Atkisson*** – No competent and substantial scientific evidence was provided establishing that the Petitioners’ health, safety or livelihood would be unduly impaired by impacts from activities within the authority of any environmental law or regulation administered by the Missouri Department of Natural Resources that the recommended mining permit would authorize. *See, **Individual Petitioners** – Michael & Jacqueline Atkisson, infra; 10 CSR 40-10.080(2)(B) & (3)(D).*

80. ***Petitioner Joseph Bax*** – No competent and substantial scientific evidence was provided establishing that the Petitioner’s health, safety or livelihood would be unduly impaired by impacts from activities within the authority of any environmental law or regulation administered by the Missouri Department of Natural Resources that the recommended mining permit would authorize. *See, **Individual Petitioners** – Joseph Bax, infra; 10 CSR 40-10.080(2)(B) & (3)(D).*

81. ***Petitioners Steve & Teresa Beeny*** – No competent and substantial scientific evidence was provided establishing that the Petitioners’ health, safety or livelihood would be unduly impaired by impacts from activities within the authority of any environmental law or regulation administered by the Missouri Department of Natural Resources that the recommended mining permit would authorize. *See, **Individual Petitioners** – Steve & Teresa Beeny, infra; 10 CSR 40-10.080(2)(B) & (3)(D).*

82. ***Petitioner Mary Denton*** – No competent and substantial scientific evidence was provided establishing that the Petitioner’s health, safety or livelihood would be unduly impaired by impacts from activities within the authority of any environmental law or regulation administered by the Missouri Department of Natural Resources that the recommended mining permit would authorize. *See, **Individual Petitioners** – Mary Denton, infra; 10 CSR 40-10.080(2)(B) & (3)(D).*

83. ***Petitioners Larry & Vicky Stockman*** – No competent and substantial scientific evidence was provided establishing that the Petitioners’ health, safety or livelihood would be unduly impaired by impacts from activities within the authority of any environmental law or regulation administered by the Missouri Department of Natural Resources that the recommended mining permit would authorize. *See, Individual Petitioners – Michael & Jacqueline Atkisson, infra; 10 CSR 40-10.080(2)(B) & (3)(D).*

84. ***Petitioner Robert Zawislak*** – No competent and substantial scientific evidence was provided establishing that the Petitioner’s health, safety or livelihood would be unduly impaired by impacts from activities within the authority of any environmental law or regulation administered by the Missouri Department of Natural Resources that the recommended mining permit would authorize. *See, Individual Petitioners – Robert Zawislak, infra; 10 CSR 40-10.080(2)(B) & (3)(D).*

85. ***Petitioners Donald Baker, Jack & Barbara Farris, Joyce Mace, Clinton & Tamira Sheppard, Judy Taylor, Carl Williams, John Williams, Andrew Zawislak, John & Mariline Zawislak*** – No competent and substantial scientific evidence was provided establishing that the Petitioners’ health, safety or livelihood would be unduly impaired by impacts from activities within the authority of any environmental law or regulation administered by the Missouri Department of Natural Resources that the recommended mining permit would authorize. *See, Individual Petitioners – Donald Baker, Jack & Barbara Farris, Joyce Mace, Clinton & Tamira Sheppard, Judy Taylor, Carl Williams, John Williams, Andrew Zawislak, John & Mariline Zawislak, infra; 10 CSR 40-10.080(2)(B) & (3)(D).*

Board Petitioner

86. ***Board Petitioner – Fact Witness (Sunrise Beach Quarry) – Alfred Bisogno, Joyce Sallach, Barbara Jean Robinson*** – No competent and substantial scientific evidence was provided by the testimony of these witnesses establishing that the safety of the Joint Sewer Board’s Sewage Plant or that Osage Beach’s sewer lines crossing the Magruder property would be unduly impaired by impacts from activities within the authority of any environmental law or regulation administered by the Missouri Department of Natural Resources that the recommended mining permit would authorize. Specifically, none of the testimony of these witnesses constituted scientific evidence to establish that the operation of the Magruder quarry would result

in a rupture of the sewage lines or damage to the sewage plant. *See, **Board Petitioner – Fact Witnesses, infra; 10 CSR 40-10.080(2)(B) & (3)(D).***

87. **Board Petitioner – Fact Witnesses (Sewage Plant, Sewage Lines, Lake Economy) – King, Hutchcraft, Gognan, Edelman, Lyons** – No competent and substantial scientific evidence was provided by the testimony of these witnesses establishing that the safety of the Joint Sewer Board’s Sewage Plant or that Osage Beach’s sewer lines crossing the Magruder property would be unduly impaired by impacts from activities within the authority of any environmental law or regulation administered by the Missouri Department of Natural Resources that the recommended mining permit would authorize. Specifically, none of the testimony of these witnesses constituted scientific evidence to establish that the operation of the Magruder quarry would result in a rupture of the sewage lines or damage to the sewage plant. *See, **Board Petitioner – Fact Witnesses, infra; 10 CSR 40-10.080(2)(B) & (3)(D).***

88. **Board Petitioner – Expert Witness – Donald E. Dressler, P.E. – Zero Tolerance Theory** – The Zero Tolerance Theory asserted by Mr. Dressler was not established by competent and substantial scientific evidence. It was not recognized by any authority in forced main pipeline construction, building construction, or any authority in blasting in close proximity to pressurized pipelines of either ductile iron or polyvinyl chloride (PVC) or concrete structures. It was not derived from facts and data generally relied upon by other experts in the given field. It was not otherwise reliable. *See, **Undue Impairment to Safety of Sewer Plant and Sewer Lines Not Proven, infra; 10 CSR 40-10.080(2)(B) & (3)(D).***

89. **Sewer Lines Unknown Factors Argument** – The arguments put forth by Petitioners regarding various unknown factors related to the sewer lines did not constitute competent and substantial scientific evidence to establish undue impairment to the safety of the sewer lines. *See, **Conclusion – Sewer Line Unknown Factors Argument Unpersuasive, infra.***

90. **Board Petitioner – Expert Witness – Donald E. Dressler, P.E. – Settling of Bedding** – The claim as to settling of bedding under the sewer pipes and potential impact of blast vibrations was not established by competent and substantial scientific evidence. The

asserted claim amounted to nothing more than conjecture by the witness. See, **Conclusion – Settling of Bedding Not Established**, *infra*.

91. **Board Petitioner – Expert Witness – Donald E. Dressler, P.E. – Fatigue Fracture** – The claim as to fatigue fracture of the sewer pipes cause by impact of blast vibrations was not established by competent and substantial scientific evidence. The asserted claim amounted to nothing more than conjecture by the witness. See, **Conclusion – Fatigue Fracture Not Established**, *infra*.

92. **Board Petitioner – Expert Witness – Donald E. Dressler, P.E. – Sewer Plant** – No competent and substantial scientific evidence was presented to establish undue impairment to the safety of the sewer plant and its equipment based upon Mr. Dressler’s zero tolerance theory. The witness failed to establish that the PPV of 2 ips (*Missouri Blasting Safety Act Standard for Uncontrolled Structures*) or less would damage the concrete basins and other structures of the plant. See, **Conclusion – Safety of Sewer Plant**, *infra*; 10 CSR 40-10.080(2)(B) & (3)(D).

93. **Board Petitioner – Expert Witness – Donald E. Dressler, P.E. – Karst Topography Issue** – The conclusion of Mr. Dressler that the Bowlin Hollow site is karst topography was not based upon any scientific data or any substantive evidence. It was mere conjecture of a possibility. The relevant evidence on this issue establishes there is no basis upon which a conclusion can be reached that the Magruder site is karst topography. There is no evidence supporting a conclusion that karst topography on the site would unduly impair the health, safety or livelihood of any petitioner. See, **Karst Topography Issue**, *infra*; 10 CSR 40-10.080(2)(B) & (3)(D).

94. **Board Petitioner – Expert Witness – Donald E. Dressler, P.E. – Objections to Blast Plan** – The seven objections raised – *Environmental Impact Statement, Enforceability, Modification, Seismographs, Seismographs Monitor, Third-Party Blaster and Quarrying Starting Point* – by Mr. Dressler’s report on the Worsey blast plan and his testimony related thereto did not constitute scientific evidence to establish undue impairment to the health, safety or livelihood of any petitioner or a pattern of noncompliance. The objections constituted nothing

more than Mr. Dressler taking issue with these matters as they related to the blasting plan. *See, PETITIONERS' CHALLENGES TO BLAST PLAN, infra.*

95. ***Board Petitioner – Expert Witness – Donald E. Dressler, P.E. – Opinions and Conclusions*** – The opinions and conclusions rendered by Mr. Dressler were not founded upon competent substantial scientific evidence to establish that the Worsey Blast Plan would unduly impair the safety of the Joint Sewer Board's Sewage Treatment Plant or the Sewer Lines of the City of Osage Beach. The opinions and conclusions were not recognized by any authority in forced main pipeline construction, building construction, or any authority in blasting in close proximity to pressurized pipelines of either ductile iron or polyvinyl chloride (PVC) or concrete structures. They were not derived from facts and data generally relied upon by other experts in the given field. They were not otherwise reliable. *See, Undue Impairment to Safety of Sewer Plant and Sewer Lines Not Proven, infra; 10 CSR 40-10.080(2)(B) & (3)(D).*

96. ***Board Petitioner – Failure to Prove Damage to Sewage Treatment Plant*** – The Board Petitioner failed to present any competent and substantial scientific evidence to establish that peak particle velocities of less than 0.52 to 0.71 ips (*See, Findings of Fact, 88, 91, supra, and 98, 99 & 102, infra*) would damage the sewage treatment plant or any of its equipment. No scientific evidence was presented to establish that dust migration would occur from the quarry to the sewer plant or that it would reach and damage any electronic equipment.

97. ***Board Petitioner – Failure to Prove Damage to Sewer Pipelines*** – The Board Petitioner failed to present any competent and substantial scientific evidence to establish that peak particle velocities of less than 1.8 – 2.45 ips (*See, Findings of Fact, 88, 89 & 90, supra, and 98 – 101 & 103, infra*) would damage the sewer pipelines.

98. ***Peak Particle Velocity*** – Peak Particle Velocity (PPV) is the maximum velocity that a ground particle reaches from a blast. It is measured in inches per second (*ips*). However, it is not a measure of the distance that a particle is displaced. It is a measure of velocity. *6/4 Tr. 20:5-14 – Mirabelli Testimony*. A PPV of 5 ips (4.92) is the recommended standard by the U. S. Bureau of Mines when blasting in close proximity to buried pressurized pipelines and it is the

PPV utilized under the Dyno Nobel standard operating procedure. 6/4 Tr. 157:19-25 – *Mirabelli Testimony*. The PPV of 5 is not the level at which pressurized pipes would be damaged. 6/4 Tr. 98:10 – Tr. 99:5 – *Mirabelli Testimony*. It is far below the PPV levels which have been established in actual testing without doing damage. A formula developed by Lewis L. Oriard sets a PPV of 12 ips which is essentially the same as 5 ips under the Bureau of Mines and Dyno Nobel formula. 6/4 Tr. 158:1-12 – *Mirabelli Testimony*. See also, *Testimony and Expert Reports of Dr. Worsey and Mr. Henderson*.

99. **Peak Particle Velocity – Missouri Blasting Safety Act.** The Missouri Blasting Safety Act establishes the PPV for uncontrolled structures – any dwelling, public building, school, church, commercial building, or institutional building that is not owned or leased by the person using explosives, or otherwise under the direct contractual responsibility of the person using explosives – to be 2 ips. §319.303(25) & § 319.312.1(1) RSMo; *Worsey, Mirabelli & Henderson Testimony*. The vibration created at 2 PPV is a vibration about the thickness of two sheets of copy paper. 5/23 Tr. 170:14 – Tr. 173:6. This is a vibration level which will not damage sheetrock. The blasting at the Bowlin Hollow site, under the Worsey blast plan will be below the PPV of 2 ips for the sewage treatment plant and under 5 ips PPV for the pipelines.

100. **Peak Particle Velocity on Sewer Lines – 50 Foot Hole Depth** – There is a difference in the velocity of vibration on the ground surface and the buried pipe. The surface vibration is higher than the PPV in the ground. Pipelines vibrate similarly to the ground which surrounds them. Larger amplitude surface waves do not exist at depth and therefore as depth increases the vibration levels decrease. *Exhibit APP – 8, p.26*. Under the Oriard formula the difference for the subsurface PPV amounts to a factor or transfer function of 2 based upon the depth of cover on a pipe. *Exhibit APP – 9, p. 35*; 6/4 Tr. 97:15 – Tr. 98:9. The estimated PPV at the ground surface of the sewer lines for a 50 foot hole depth and at a distance of 150 feet from the blast boundary would result in a PPV of 3.6 ips to 4.9 (*dry or wet hole*) under the Bureau of Mines and Dyno Nobel formula or a 5.4 ips to 7.4 ips under the Oriard formula. Under the Oriard formula the estimated PPV on the sewer pipes would drop to a range of 2.7 to 3.7 ips (*dry or wet hole*), well below the level of 12 ips standard. *Exhibit APP – 9, pp. 34-35*; 6/4 Tr. 95:4 – 98:9 – *Mirabelli Testimony*.

101. ***Peak Particle Velocity on Sewer Lines – 25 Foot Hole Depth*** – The actual rock face at 150 feet from the sewer lines does not rise to a height of 50 feet. The rock face slopes to approximately 25 feet in height. This would result in a reduction in the amount of explosive to be used in blasting in the holes nearest the sewer line easement. Utilizing the 25 foot hole depth at a distance of 150 feet results in a PPV of 1.8 – 2.45 under the Bureau of Mines and Dyno Nobel formula, and a reduction to 2.7 – 3.7 for the Oriard formula. *6/4 Tr.100:1 – Tr. 101:2 – Mirabelli Testimony*. The highest PPV on the sewer pipes when the quarrying approaches to the closest point to the sewer lines will be 51% to 64% below the Bureau of Mines recommendation and the formula utilized by Dyno Nobel.

102. ***Peak Particle Velocity on Sewage Treatment Plant*** – The estimated PPV at the Sewage Treatment Plant based upon a 50 foot hole depth and a 500 foot offset from the blast boundary would range from only 0.52 to 0.71 ips (*Bureau of Mines/Dyno Nobel formula*) or 0.79 – 1.1 ips (*Oriard Formula*), below the 2 PPV mandated by the Missouri Blasting Safety Act. *Exhibit APP 9, p. 36; 6/4 Tr. 99:5-11*. Quarrying in zones A, B and C will never be closer than 700 feet to the sewer plant and the starting point will be approximately 1,000 feet from the plant.

103. ***Risk to Pipelines*** – Lewis L. Oriard, recognized expert by Bureau of Mines and Applicant's expert witnesses, in his involvement in many large pipeline projects as well as roughly 350 urban pipeline and utility projects has concluded that blasting risk to pipelines is from block motion (*shifting of ground into the pipe*) or from having the pipeline in the actual blast crater zone. Oriard suspects no vibration velocity (*PPV*) criterion is needed, nor is it meaningful. He concluded that failure is initiated in the surrounding ground, which is weaker than the pipe, and that it is better to apply either vibration or blasting criteria to the ground around the pipe rather than to the pipe alone. *Exhibit BP – 54, p. 3*. The four experts testifying in this proceed all concurred that none had knowledge of any type of pipeline being damage due to blasting vibrations. The four experts represent a total of more than 122 years in involvement in blasting – Dressler (45); Mirabelli (34); Worsey (27); Henderson (16).

104. ***Pattern of Noncompliance*** – No competent and substantial scientific evidence was provided to establish that Magruder had, during the period from April 18, 2002 to April 18,

2007, demonstrated a pattern of noncompliance at other locations in Missouri that suggests a reasonable likelihood of future acts of noncompliance. *See, Pattern of Noncompliance Issue, infra; 10 CSR 40-10.080(3)(B), (E), & (F).*

CONCLUSIONS OF LAW **and** **DECISION**

JURISDICTION

The hearing in this matter is authorized by § 444.773.3 RSMo, which provides in relevant part: “...If the public meeting does not resolve the concerns expressed by the public, any person whose health, safety or livelihood will be unduly impaired by the issuance of such permit may make a written request to the land reclamation commission for a formal public hearing. The land reclamation commission may grant a public hearing to formally resolve concerns of the public. Any public hearing before the commission shall address one or more of the factors set forth in this section.” *See also, 10 CSR 40-10.080(1)(F).*

The Hearing Officer was duly appointed by the Land Reclamation Commission of the Department of Natural Resources to conduct a hearing and recommend to the Commission a decision. §444.789.3 RSMo; 10 CSR 40-10.080(5)(C)(3). The Hearing Officer and the Commission have jurisdiction over this appeal.

HEARING PROCEDURE

Section 444.789 provides that the hearing held in this matter is a contested case, that the parties may conduct discovery, make oral arguments, introduce testimony and evidence, and cross-examine witnesses. The statute authorizes a member of the Missouri Bar to be appointed to hold the hearing and make recommendations, with the final decision reserved to the Commission. The Hearing Procedure mandated by statute and regulation was followed in this case. 10 CSR 40-10.080(5)

MOTION TO DISMISS & JOINT MOTION TO DISMISS DENIED

Board Petitioner originally filed its Motion to Dismiss. Said Motion was denied. Board and Concerned Citizens of Miller and Camden Counties (*non-party*) then filed a Joint Motion for Reconsideration of the denial of the Motion. Motion for Reconsideration was granted as to Board Petitioner and denied as to Concerned Citizens. Memoranda on the Application Process

were filed by the parties. Testimony was received at hearing from MDNR employees, Mitchell W. Roberts, William S. Zeaman, Larry P. Coen, and from Magruder Vice-President Dean A. McDonald relative to the process on filing of the Permit Application and supplemental filings. Petitioners filed their Joint Motion to Dismiss, or in the Alternative Motion for Leave to Add Parties. Respondent and Applicant filed their Responses to the new Joint Motion and Petitioners filed their Joint Reply. *See, **Findings of Fact** 31, 40, 41, 46, 47, 51, 55, 59, 60 & 62 (Procedural History)*.

Grounds Presented for Dismissal

In the original March 4th Motion to Dismiss, Board Petitioner presented three grounds as a basis for granting the Motion to Dismiss. The grounds asserted for dismissal were:

1. Application failed to include a map identifying utilities on the land to be mined;
2. Application failed to include a post-mining land use for the land to be mined; and
3. Application failed to include all parties with any interest in the land to be mined.

In the May 22nd Joint Motion to Dismiss Petitioners presented the following arguments for dismissal: Application was incomplete when filed in the following respects:

1. It did not contain a map illustrating the names of any persons or businesses having any surface or subsurface interest in the land to be mined;
2. It did not include a permit map identifying the post-mining land use;
3. Applicant is not permitted to amend its petition (sic – application) at any time in the application process;
4. Publication of notice was premature; and
5. It contained false information with regard to the source of right to mine.

Ruling on Motions

Petitioners' Motion is erroneously predicated upon the supposition that the remedy for the filing of an alleged incomplete application is to dismiss the matter when it reaches the Formal Public Hearing stage. No such statute or rule is cited to in support of this proposition, as none exists. Given the absence of a statutory or regulatory mandate to dismiss an application for alleged incompleteness, the argument advanced by Applicant contains merit. (*App. Response –*

Petitioners' Joint Motion to Dismiss is Improper) Applicant argues that there cannot be a Motion to Dismiss, what in reality Petitioners have presented is a Motion for Summary Judgment and that such a Motion is defective under Missouri Rules of Court. However, Counsel for Respondent's argument is a very compelling response to the Motions to Dismiss. Counsel correctly asserts:

"The motions argue hyper technicalities, and granting either of them would conflict with the Commission's goal to expeditiously reach the merits of the health, safety and livelihood concerns raised by the persons who acted on the notice they obviously received about the proposed permit, who timely requested a hearing, and who made a credible case for the Commission to order it. That the prejudice that would allegedly be suffered by persons who might have asked for a hearing had they known about the sewer and power line easements seems outweighed by the prejudice that would surely result, whether from restarting the entire process or protracting it beyond the months and costs already invested, to both the persons who properly asked for the hearing and the Applicant who has had little choice but to participate in it. Besides, there can be no showing that the named Petitioners have not been adequately representing the interests of others who would claim to be concerned about the impact of quarry operations on the sewer and utility lines."

Supplement of Application

The issue of whether an applicant may provide supplemental information for an application will be first addressed. Petitioners argue that there is no regulation that permits the applicant to supplement its application by providing additional information or documents. The fact is there is no specific rule specifically allowing or denying such supplementing of an application. Therefore the argument weighs as heavy on once side as the other.

The actual practice in the Land Reclamation Program (LRP) is that an applicant may add additional information to the original application. *Coen Testimony – 4/28 Tr. 222:7-16*. This is completely in accord with the regulation which controls the permit application requirements. Before the permit may be issued, the applicant must submit the required information. *10 CSR 40-10.020(1)*. This allows for amending an application or supplementing the documents required to be filed. There is no prohibition on the submission of supplemental information or documents. The regulations do not require simply because there is some omission or error in an application that the Director must recommend denial, nor that the Commission should deny the application. The permit simply has to be complete before it will be issued. Therefore any omissions or errors are subject to correction in order that the permit may be deemed complete and be issued.

Petitioners' point is not well taken. An applicant is permitted to supplement an application to correct any omission or error. In the present instance, irrespective of whether all the required information was submitted with the April 18, 2007 application, Magruder has submitted the information which the LRP later required, so that at this time the permit may be issued. *Coen Testimony – 4/28 Tr.237:25 – 238:6*. Counsel for Individual Petitioners conceded that with the supplemental filing in February 2008 the application was complete with the exception of the lease issue. *5/23 Tr. 18:19 – 19:1*. The lease issue will be addressed below.

Premature Publication Notice

Petitioners argue that the publication notice was premature due to the alleged deficiencies in the application and therefore, Applicant had to make a new publication notice after submitting supplemental documents. The argument is that because the application allegedly did not contain the information set out under the grounds for dismissal cited above, Magruder could not publish the required notice. Petitioners claim the remedy is to require a new publication after additional information was provided to the LRP by Magruder. The argument is not well founded. The argument fails to recognize the notice requirements set out in the regulation.

On May 14, 2007, the application was deemed complete and Magruder was instructed by the LRP to publish the required notice and to mail the required notice letters. *Exhibit MP-5, Letter Roberts to McDonald, 5/14/07*. It was totally reasonable for Magruder to rely upon this direction from the LRP and proceed to publish notice. Magruder thereafter published notice as required by 10 CSR 40-10.020(2)(H). *Exhibit APP-4*.

The items to be contained in the notice to be published are specifically set forth in the regulation as subsections 1 through 5 and required the following:

“The notice must contain the following:

1. A statement of intent to conduct surface mining specifying the mineral and estimated period of operation.
2. The name and address of the operator;
3. A legal description of affected land consisting of county, section, township and range;
4. The number of acres involved;
5. A statement informing the public that written comments or a request for a public and/or informal public meeting may be made by any person with a direct, personal interest in one or more of the factors that the Missouri Land Reclamation Commission may consider in issuing a permit as required by The Land Reclamation Act, sections 444.760 to 444.790, RSMo, or whose health, safety or livelihood will be unduly

impaired by the issuance of a permit regarding items such as permitting and reclamation requirements, erosion and siltation control, excavations posing a threat to public safety, or protection of public road rights-of-way.”

Nothing contained in either the original Motion to Dismiss or the Joint Motion to Dismiss allege any error or omission with regard to the notice published by Magruder for failing to comply with 10 CSR 40-10.020(2)(H)1-5. Magruder did in fact so comply. *Exhibit APP-4*. The Public Notice was a complete, accurate and proper notice.

None of the alleged deficiencies asserted in either the Board’s Motion to Dismiss or the Joint Motion to Dismiss would result in the publication of a different notice than that shown by Exhibit APP-4. The publication regulation has no requirement with regard to the detail map. None of the five elements required for the public notice reference the detail map or the other claimed errors asserted by the Petitioners. Petitioners’ allegation that the omission of the items set forth in their Joint Motion resulted in anyone being excluded from the Formal Public Hearing is completely without basis and merit.

Petitioners’ ground for dismissal that the publication notice was premature is not well taken. All of the required information to be set forth in the public notice was provided in the original application. The LRP properly issued its letter instructing Applicant to publish notice and mail letters as required by the regulations. Any republished notice would have read exactly the same as the one originally and properly published. There is no basis in statute or regulation to require an applicant to republish the Public Notice when no error existed in the original notice.

Post-Mining Land Use

The Petitioners’ next alleged deficiency in the Magruder Application is that it failed to include a post-mining land use for the land to be mined on the detail map submitted with the application. This assertion is an excellent example of a hyper technicality referenced by Respondent’s Counsel. *Respondent’s Response*. Under 10 CSR 40-10.02(2)(E)2.G the detail or permit map is to identify “post-mining land use designations.” The detail map submitted with the application did not have any words written on the map which described the post-mining land use designation. However, the application (*Mine Plan*) on page 4 of 5 under heading D. Use of Land When Reclaimed has written 205 acres (*the total acreage*) in the space for Estimated Acres on the line reading: Development (*residential, industrial and recreational*).

The Use of Land When Reclaimed section on the Application lists four general descriptive areas for reclaimed land, they are: Wildlife, Agricultural, Development and Water Impoundments. Since Magruder indicated that all 205 acres would be reclaimed for development, there was only one designation that could be put on the map. If parts of the 205 reclaimed acres were going to be for water impoundments and part for wildlife and the rest for development, then it would have made sense to have submitted a map which would locate and designate the approximate areas for each of these post-mining uses. However, when an Applicant indicates that the total reclaimed land is to be used for only one of the four land uses, marking that on the detail map becomes an unnecessary redundancy. It is not a basis to reject the application and make the applicant start the process all over again.

Simple common sense tells one that if the mining plan is for 205 acres and the post-mining land use for 205 acres is for development as specified on the Commission's form, then there really is no designation to be made on the detail map. Color coding the entire mine plan acreage or marking it in some other fashion to indicate that all of the mined area will be for development achieves nothing over what would already be known from simply reviewing the appropriate part of the application (*D. Use Of Land When Reclaimed*) and looking at the detail map as it was originally submitted. Post-mining land use which is for two or more of the categories set forth in the application would call for so indicating those uses on the areas of the map where they would be applicable.

Magruder did not fail to identify the post-mining land use. It was properly indicated on the Mine Plan in the space provided. Any person reviewing the application and looking at the detail map could only reach one conclusion, the entire tract when mining is completed will be for development – residential, industrial or recreational. The application was not incomplete on this point. The points advanced by the Petitioners on this matter are clearly, under the circumstances of this case, the type of trifle for which the law need take no notice (*de minimus non curat lex*). Petitioners' point is not well taken.

Completeness of Detail Map

Board Petitioner argued in its Motion to Dismiss that the detail map did not identify utilities on the land to be mined. The Joint Motion to Dismiss asserts the detail map did not illustrate the names of any persons or businesses having any surface or subsurface interest in the land to be mined. There is both a statutory and regulatory provision addressing the matter of the

detail map. These governing provisions are section 444.772.2(1) & 3 RSMo and 10 CSR 40-10.020(2)(E)2.A.

The statute requires that the application for permit is to include the name of all persons with any interest in the land to be mined and be accompanied by a map in a scale and form specified by the commission by regulation. The regulation actually requires two maps. One is known as the locator map and the other is the detail map. Specifically the regulation states with regard to the detail map:

“2. One (1) map of sufficient scale and detail to illustrate the following:

A. The names of any persons or businesses having any surface or subsurface interests in the lands to be mined, including owners or leaseholders of the land and utilities as well as the names of all record landowners of real property located contiguous or adjacent to the proposed mine plan area.”

The regulation provides the detail for the statutory requirement. The regulation establishes two general categories of persons or entities for illustration on the detail map. These are names of persons or businesses having any surface or subsurface interests in the lands to be mined, and record landowners of real property contiguous or adjacent to the proposed mine plan area. The second category is not in question in this appeal. As to placing the names of Eolia and Magruder on the detail map, it would be a further redundancy, since the Application clearly provides that Eolia was owner after May 1, 2007 and Magruder would be the leaseholder. The omission of writing those two names and identification of owner and leaseholder in no manner denied any petitioner or other person or entity due process rights regarding the public formal hearing.

The category with which the assertion of error deals is that of “persons or businesses having any surface or subsurface interests in the lands to be mined.” This category is further defined to include “owners or leaseholders of the land and utilities.” Petitioners’ claim rests on its assertion that the original detail map did not show the location of the Osage Beach and Union Electric easements. The original map did not so indicate by named designation the sewer line easement or the power transmission line easement. The question becomes whether the application should be denied on this basis.

There exists no statutory or regulatory basis to deny the permit application due to this alleged omission. This does not constitute scientific evidence that a hearing petitioner’s health, safety or livelihood will be unduly impaired by impacts from activities that the recommended

mining permit authorizes. *10 CSR 40-10.080(3)(D)*. Nor does allegation constitute scientific evidence that Magruder has, during the time period from April 18, 2002 to April 18, 2007, demonstrated a pattern of noncompliance at other locations in Missouri that suggests a reasonable likelihood of future acts of noncompliance. *10 CSR 40-10.080(3)(E)*.

The checklist utilized by the LRP when the Magruder application was filed did not address the matter of easements. The Commission's application form does not call for any reporting of easements on land to be mined. Easements are not mentioned in the statute or regulations. The position of the LRP up until this particular case was not to require the showing of easements on the detail maps. *Roberts' Testimony – 4/28 Tr. 47:18 – Tr. 48:8; Tr. 57:20-23; Zeaman Testimony – 4/28 Tr. 206:24 – Tr. 207:2; Coen Testimony – 4/28 Tr. 226:11-21*. Magruder complied with the checklist, practice and policy in place with the LRP at the time the present application was submitted. Therefore, under the procedures in place when the application was received, Magruder was in compliance and had submitted a complete application. In February, 2008 when the LRP brought to Magruder's attention that a map indicating the two easements was to be submitted, Magruder so complied.

There is one further aspect of this particular issue that briefly needs to be addressed. No evidence was presented upon which the conclusion can be reached that either Union Electric or Osage Beach have any surface or subsurface interest in the land to be mined. The easements each entity holds gives neither Union Electric nor Osage Beach any mineral rights in the land to be mined. The evidence failed to establish if in fact the mine plan would mine mineral on a part of the Union Electric easement. There is no prohibition in the easement on this point.

With regard to the Osage Beach easement, it grants the right on a thirty foot wide strip of land to maintain the sewer lines and nothing more. Because of the nature of this particular easement Magruder is precluded from mining on the thirty foot wide strip of land, but in like manner Osage Beach has no right to mine on that land. The grammatical structure of the regulation applies the condition of surface or subsurface interest in the lands to be mined to owners, leaseholders and utilities. In this particular instance, Osage Beach's interest in the Magruder land ends at the border of the easement. The land to be mined does not include the easement, therefore Osage Beach has no interest in the land which Magruder would mine under the expansion of permit 0086. *Exhibit BP-18, Osage Beach Easement Documents*.

Petitioners' point is not well taken. Magruder properly complied with the then existing checklist, practice and policy and did not indicate the easements on the original detail map. This was not an omission or error at that time. Upon the LRP staff deciding that the application should be supplemented with a map showing the easements, Magruder complied. Under the regulatory mandate that the applicant must submit the required information before a permit be issued, Magruder complied on this point under the requirements in place when the application was filed. The additional submission (*new detail map*) when the requirement was changed has been provided. In either case, the application is complete so that it may be approved and the expansion of the permit granted.

Allegation of False Information

The final point raised by Petitioners is the allegation the application contained false information with regard to the source of right to mine. Mr. McDonald when completing the Site Information portion of the application under the section for Mineral Rights Owner, the box for "Lease" was checked, with the notation – (We are Leasing from Eolia Development). The date of agreement was given as 5-1-07. The cover letter for the application provided the following information: "Eolia Development currently has a contract on this parcel of ground and is closing on it May 1, 2007, thus the reason they signed the 'consent to entry' form. Eolia Development is one of our companies. We, Magruder Limestone Co., Inc., will be leasing the mining rights from them."

The claim of Petitioners is that checking the box for lease gave false information because there was not in existence any lease at the time the application was completed – 4-18-07, or on the date when Eolia Development was to close on the tract of land – 5-1-07. Further, Petitioners claim that the handwritten notation – We are Leasing from Eolia Development – is a statement that a lease existed at that time. Petitioners assert that the box "Verbal" should have been marked, since no lease was in existence on April 18, 2007.

Petitioners' claim is without merit. The purpose of the Site Information is to establish who the landowner is and who the mineral rights owner is. The information boxes for the Source of Right to Mine is to establish whether the mineral rights are derived from a Mineral Deed, Warranty Deed, Lease, Verbal or Other. Mr. McDonald properly marked Lease in the box under the Mineral Rights Owner section. Mr. McDonald understood he was properly completing the form. There is no evidence to establish any intent to provide "false" information or to mislead

the LRP or Commission with regard to the owner of the land and whether Magruder had the right to mine the land.

While it is true that no written lease existed when the application was filed, it is a totally irrelevant point. The LRP does not require the filing of such a lease. What is important is whether the Applicant has the right to mine the minerals. Petitioners made no claim that Magruder will not have the right to mine the minerals. Petitioners make no claim that some other entity owns the mineral rights.

Petitioners' hyper strict interpretation of the checking of the Lease box and writing – We are Leasing from Eolia Development – is a statement of the existence of a present lease flies in the face of the facts contained in the four corners of the application and the cover letter. Anyone reviewing the application and the cover letter would know that on April 18, 2007, Eolia would not be the owner of the Miller County land and therefore could not execute a lease as owner. Therefore the reasonable reading to be applied to the application is that Magruder will have the right to mine the property from a lease with Eolia. The information provided was not false. It properly identified the land owner and the mineral rights owner and that Magruder's right to mine would be derived from a lease. There is no evidence that there are any other entities other than Eolia and Magruder that have rights regarding mining of the Miller County land.

Conclusion

Board Petitioner's Motion to Dismiss and Petitioners' Joint Motion to Dismiss are denied. The Order Denying Motion to Dismiss, dated March 21, 2008, is hereby incorporated by reference in this Recommended Order as if set out in full herein.

There is no basis in law to dismiss the application, nor is there any basis in law to deny the application on any of the grounds asserted in the two Motions. At the time Magruder submitted its application (*April 18, 2007*) it was a complete application under the existing checklist, policy and practice of the LRP. All necessary information required for publication of public notice was provided. The Public Notice of Surface Mining Application Permit Expansion published on May 17, May 24, May 31 and June 7 was in proper form. The supplemental map later required by the LRP to be filed by Magruder did not require a republication of the Public Notice.

Petitioners' due process rights in the Formal Public Hearing were in no manner impacted by the alleged incompleteness of the Magruder application. The allegations raised are irrelevant

to the issues to be determined in this matter and a determination by the Commission on approving or denying the Director's recommendation that the permit expansion application be approved.

MOTION FOR LEAVE TO ADD PARTIES DENIED

Petitioners filed in the alternative to the Joint Motion to Dismiss, their Motion for Leave to Add Parties. Petitioners moved for leave to add the following entities as additional parties: Concerned Citizens of Miller County, Miller County Board for Services for Developmentally Disabled, Lakeview Christian Academy, Golden Age Activity Center, Ted Bax and the City of Osage Beach. The basis which Petitioners assert for adding these parties rests upon their erroneous claim that the Applicant was required to republish the Public Notice after February 8, 2008, when it provided a new detail map that had been required by the LRP after approval of the original application for publication. As addressed above, the filing of the new detail map did not alter the information that is required by regulation for the Public Notice. ***Premature Publication Notice, supra.*** Magruder's application was complete under the existing checklist, practice and policy of the LRP when it was instructed to publish the Public Notice. *Exhibit MP-5, Letter Roberts to McDonald, 5/14/07.* There is no statutory or regulatory basis for adding of parties as is sought in the Alternative Motion due to the filing of an additional detail map. There is no statutory or regulatory authority for reopening a matter for public comment or requests for formal public hearing upon the submission by an applicant of supplemental information.

The Hearing Officer has previously ruled on a Motion to Add Petitioners relative to Concerned Citizens of Miller and Camden Counties, Miller County Board for Services for Developmentally Disabled, Lakeview Christian Academy, Golden Age Activity Center and Ted Bax. **Order Denying Motion to Add Petitioners, 2/28/08.** The deadline for filing of written comments and written requests for hearings and/or public meetings was June 22, 2007. *Exhibit APP-4.*

Concerned Citizens of Miller and Camden Counties, LLC

Concerned Citizens of Miller and Camden Counties, LLC, (*Concerned Citizens*) according to records on file with the Secretary of State, this LLC came into existence on November 9, 2007. The sole incorporated and the registered agent of the corporation is Brian E. McGovern, the attorney of record for the Individual (McGovern) Petitioners. The legal entity – Concerned Citizens of Miller County and Camden Counties, LLC – did not exist during the time

for public comment or request for a formal public hearing in this matter. It therefore did not and does not now have standing to request a formal public hearing. To have standing as a petitioner to be granted a formal public hearing requires that the proposed petitioner provides “good faith evidence of how their health, safety, or livelihood will be unduly impaired by the issuance of the permit.” 10 CSR 40-10.080(2)(A) & (B). The Alternative Motion totally fails to offer any “good faith evidence” of how the issuance of the permit will unduly impair the health, safety or livelihood of the LLC. There is no showing that the corporation owns any property in either Miller or Camden Counties that could be impacted in any form or fashion by the operation of the Quarry in Bowlin Quarry. Concerned Citizens request to be added as a petitioner is denied.

Lakeview Christian Academy, Miller County Board for Services for Developmentally Disabled, Golden Age Activity Center and Ted Bax

A review of the Public Comment Letters (*Exhibit BP-2*) established the following:

1. Carolyn M. Thrasher, Administrator, Lakeview Christian Academy signed a form letter dated 6/16/07 requesting a public meeting to address the issue of the proposed Magruder Limestone quarry.
2. L. Thrasher, Teacher, Lakeview Christian Academy signed a form letter dated 6/16/07 requesting a public meeting to address the issue of the proposed Magruder Limestone quarry.
3. No Public Comment Letters were received from Miller County Board for Services for Developmentally Disabled, Golden Age Activity Center and Ted Bax.

Therefore, no letter from the Director regarding making a request for a Formal Public Hearing would have been sent to Miller County Board for Services for Developmentally Disabled, Golden Age Activity Center and Ted Bax. Only those parties who submitted a written request to the director during the public notice period may participate in a public meeting. Only those persons and entities who requested a public meeting may make a written request for a formal public hearing. 10 CSR 40-10.080(1) (C) & (F). Miller County Board for Services for Developmentally Disabled, Golden Age Activity Center and Ted Bax failed to comply with the regulation on public meetings and hearings.

By letter dated, June 26, 2007, Director Coen instructed persons who had submitted requests for a public meeting as follows:

“If you elect to pursue a formal hearing, please submit in writing a request for a hearing explaining how your health, safety or livelihood will be unduly impaired by the issuance of this permit expansion application to: Staff Director, Missouri

Land Reclamation Commission, P. O. Box 176, Jefferson City, Missouri 65102-0176. If we receive your request for a hearing within fifteen days from the receipt of this letter, it will be presented to the Land Reclamation Commission at their September 27, 2007, meeting. Further details about that meeting location and time will be provided to anyone who might request a formal hearing. If you do not wish to pursue a formal hearing, you do not need to take further action.”

The June 26th letter was sent to Cherie L. Thrasher, Teacher, Rodney D. Thrasher, Principal, and Carolyn M. Thrasher, Administrator, Lakeview Christian Academy, 31 Woodriver Road, Lake Ozark, MO 65049. A review of the letters sent to the Director requesting a formal public hearing in response to the June 26th letter shows that no one (*Cherie L., Rodney D. or Carolyn M. Thrasher*) on behalf of Lakeview Christian Academy filed a request for a formal public hearing. The failure of Lakeview Christian academy to pursue its administrative remedy of requesting a formal public hearing precludes it from now being added as a petitioner in this proceeding. *10 CSR 40-10.080(1) (F)*. Furthermore, the Motion for Leave to Add Lakeview Christian Academy fails in any manner to establish that its failure to exercise its administrative remedy and request a formal public hearing was due in any form or fashion to the omission of the Ameren UE and Osage Beach easements from the detail map. The Motion failed to establish that in fact anyone on behalf of Lakeview had even reviewed the application after receiving the June 26th letter advising of administrative rights regarding a formal public hearing.

In like manner, the Motion failed to demonstrate that anyone on behalf of the Miller County Board for Services for Developmentally Disabled, Golden Age Activity Center or Ted Bax had reviewed the application following the publication of the Public Notice and had failed to write a letter requesting a hearing based on the omission of the Ameren UE and Osage Beach easements from the detail map.

The request for leave to add Lakeview Christian Academy, Miller County Board for Services for Developmentally Disabled, Golden Age Activity Center and Ted Bax as petitioners is denied.

Conclusion

There is no authority to reopen the proceeding to add new petitioners upon the filing of an amended detail map. All required information was contained in the Public Notice Publication and there is no requirement for a republication upon the filing of an amended detail map. Concerned Citizens of Miller and Camden Counties, Lakeview Christian Academy, Miller

County Board for Services for Developmentally Disabled, Lakeview Christian Academy, Golden Age Activity Center and Ted Bax failed to establish their compliance with 10 CSR 40-10.080(1). They failed to establish that their failure to comply with the regulation was due to the omission of the easements from the detail map. The named entities failed to demonstrated standing under 10 CSR 40-10.080(2)(A) & (B) to request a formal public hearing.

City of Osage Beach

Pre-Hearing Documents

Petitioners assert in their Alternative Motion that (1) the City of Osage Beach (*Osage Beach*) requested a formal hearing via a June 21, 2007 letter; (2) Osage Beach requested the application be denied in a June 20, 2007 letter; (3) requested a public hearing in a July 9, 2007 letter; and (4) LRP by letter dated August 30, 2007 advised Mayor Lyons, “her” request for a formal hearing was being placed on the September 27, 2007 agenda.

1. The cited letter date June 20, 2007 on the letterhead of Lake Ozark-Osage Beach Joint Sewer, 2624 Bagnell Dam Boulevard, Lake Ozark, Missouri, 65049, signed by Johnnie Franzekos, City of Lake Ozark and Penny Lyons, Mayor of City of Osage Beach, addressed to Larry Coen, stated in relevant part: “At the June 19th meeting of the Joint Sewer Board for Osage Beach and Lake Ozark, the Magruder application for an expanded mining permit was discussed. ... Therefore, our Board formally requests, with the full backing of both the City of Lake Ozark and the City of Osage Beach that this application be denied.”

It is noted that this correspondence is not from the City of Osage Beach. It is correspondence from the Joint Sewer Board. It requested the application be denied, but did not ask for a public meeting on the application. Moreover, the request for denial of the application is clearly from the Board – the Lake Ozark-Osage Beach Joint Sewer Board. Therefore, the June 20th letter did not constitute a written request from the City of Osage Beach for a formal public hearing on the application.

2. The cited letter dated June 21, 2007 on the letterhead of City of Osage Beach, 1000 City Parkway, Osage Beach, MO 65065, signed by Penny Lyons, Mayor, addressed to Doyle Childers, Director MDNR, copy to Larry Coen, stated in relevant part:

“... the Joint Sewer Treatment Plant which is jointly owned and operated by the City of Osage Beach and the City of Lake Ozark. We are one of the largest adjoining property owners to the proposed site of the quarry. ... There are two major sewer lines which run through the proposed quarry site. ... We respectfully

request that a formal hearing be held and that ALL adjoining property owners be notified and given an opportunity to discuss this matter, prior to any permit being issued by DNR for this quarry.”

While requesting a “formal hearing” it is unclear that the request is made on the part of the Joint Sewer Board or the Cities of Osage Beach and Lake Ozark or all three entities. The use of the word “We” could be understood to mean any of these three. However, the “We” referenced as “one of the largest adjoining property owners to the proposed site of the quarry,” can only refer to the Joint Sewer Board, since neither the City of Osage Beach or the City of Lake Ozark owns the Plant site. Therefore, the most reasonable construction of the “We” requesting a formal hearing refers not to the Cities of Osage Beach and Lake Ozark, but to the Joint Sewer Board.

3. The cited letter dated July 9, 2007 on the letterhead of Lake Ozark-Osage Beach Joint Sewer, 2624 Bagnell Dam Boulevard, Lake Ozark, Missouri, 65049, signed by Johnnie Franzeskos, City of Lake Ozark and Penny Lyons, Mayor of City of Osage Beach, addressed to Larry Coen, in relevant part: “... please consider this letter as our official request to hold a public hearing for the benefit of all concerned.”

Since this letter is on the letterhead of the Joint Sewer Board and signed by the alternating chairpersons of the Board, it is clearly the request of the Board for a public hearing. It cannot reasonably be construed as a request from the City of Osage Beach for a formal public hearing on the application. It is also the correspondence to the Staff Director after the June 26th letter was sent to persons who had mailed in letters asking for a public meeting on the application.

4. The cited letter dated August 30, 2007 from Larry Coen to Mayor Penny Lyons stated in relevant part, “We are placing your request for a formal hearing on the September 27, 2007 agenda for the Land Reclamation Commission.” It is clear from actions which followed that Mr. Coen considered this a response to the request on behalf of the Joint Sewer Board of July 9th, although the letter was addressed to Mayor Lyons. The presentation by Mr. Mauer at the September 27, 2007 meeting of the Commission was on behalf of the Joint Sewer Board, as his bound presentation file so notes.

Hearing Proceedings

On October 16, 2007, the Hearing Officer issued **Notice of Appointment of Hearing Officer and Order Setting Prehearing Conference**. The caption of the case listed thirty-three (33) individuals and the Lake Ozark-Osage Beach Joint Sewer Board as Petitioners. Included in the list of individual Petitioners were Penny Lyons and Johnnie Franzeskos. The City of Osage Beach was not listed as a Petitioner as it was not an entity named in the Director's documents provided to the Hearing Officer listing the individuals and entity requesting a formal public hearing.

At the Prehearing Conference, the Hearing Officer went over the list of Petitioners to ascertain who would be represented by legal counsel and who would be appearing pro se. Mayor Lyons was present with Counsel for the Joint Sewer Board. At no time during the proceedings did Mayor Lyons indicate that she was appearing in her capacity as Mayor for the City of Osage Beach or question why the City was not named as a Petitioner. At no time during the proceedings did Counsel for the Joint Sewer Board, Counsel for the Individual Petitioners or any other person indicate they were appearing on behalf of the City of Osage Beach or question why the City was not named as a Petitioner.

Following the Prehearing Conference the Hearing Officer issued his Post Pre-Hearing Conference Order, 11/28/07. In said Order the parties in attendance were identified. The Joint Sewer Board was recognized as a Petitioner, represented by Mr. Mauer. A group of individual petitioners were recognized as being represented by Mr. McGovern. The City of Osage Beach was not identified as a Petitioner. Mayor Lyons was not recognized as being an individual petitioner, as the Hearing Officer had understood she was appearing in her official capacity for the Joint Sewer Board.

The matter of whether the City of Osage Beach was a petitioner in this matter was not addressed by either Counsel for Petitioners, until the filing of the Alternative Motion on May 22, 2008. The matter was raised during the April 30th hearing during cross-examination of Mayor Lyons by Counsel for Applicant. Under cross-examination, Mayor Lyons testified to her understanding that the City of Osage Beach was not a petitioner in this matter. *See, 4/30 Tr. 257:13 – Tr. 258:11*. At no time prior to the conclusion of the hearing on June 6, 2008, did Mr. Mauer, Mr. McGovern or any other attorney seek leave to file an entry of appearance as attorney of record for the City of Osage Beach.

Conclusion

Taking into account all of the relevant correspondence referenced above and the actual proceedings which have taken place during the formal public hearings into this matter, the City of Osage Beach is not shown to have complied with 10 CSR 40-10.080(1). Therefore, the City of Osage Beach is not a petitioner in this matter.

That notwithstanding, the issue of a potential undue impairment to the safety of the City's sewer lines crossing the Magruder property was fully presented during the course of the formal public hearings. The Attorneys for Petitioners in filing their Alternative Motion made no claim that the interests of the City had failed to be represented by the evidence Petitioners propounded on the record. As noted by Counsel for Respondent, "The city has been for all intents and purposes a participant all along, and the claimed threat to its sewer lines has been thoroughly vetted." *Respondent's Response to Alternative Motion*.

NATURE OF THE CASE

Although the record in this case is lengthy, the case is not complicated. Although the Decision and Order is extensive, due to the number of petitioners and the need to address the claims each petitioner raised, the case is not difficult. The case presents only two questions to be answered. If either question is shown by the evidence to be answered in the affirmative, the Commission may deny the permit. The other side of the coin is if neither question is shown by the evidence to be answered in the affirmative the Applicant is entitled to have the Application approved.

The first question to be addressed is simply whether the Petitioners presented competent and substantial scientific evidence on the record, that a petitioner's health, safety or livelihood will be unduly impaired by impacts from quarrying in Bowlin Hollow by the Applicant. Neither Respondent, nor Applicant carries a burden of proof to establish that the permitted activity will not unduly impair a petitioner's health, safety or livelihood. Unless petitioners are able to carry their burden of proof, the expansion of Permit 0086 is to be approved. *10 CSR 40-10.080(3)(B) & (D)*.

The second question is whether the Petitioners presented competent and substantial scientific evidence on the record that Magruder has during the five (5) year period immediately preceding the date of the permit application, demonstrated a pattern of noncompliance of

environmental law administered by the MDNR at other locations in Missouri that resulted in harm to the environment or impaired the health, safety or livelihood of persons outside the facility and suggests a reasonable likelihood of future acts of noncompliance. If the evidence fails to establish such a pattern of noncompliance to suggest a reasonable likelihood of future noncompliance, the permit is to be granted. Here again, the petitioners bear the burden of proof on this issue. *10 CSR 40-10.080(3)(B), (E) & (F)*

PETITIONERS' BURDEN OF PROOF

General Burden of Proof

The burden of proof as it relates to the issues raised and the relief sought by Petitioners is on the Petitioners. The general principle is that the burden of proof rests on the party bringing the action, the Petitioners in the present case. In general, the party seeking to establish a claim bears the burden of proof to establish the entitlement to the claim. *20 MoPrac. §10:73, p. 409.*

Petitioners were required therefore, to present competent and substantial evidence to support their claims for relief in opposition to Magruder's Application for Expansion of Permit # 0086. *Mo. Const. Art. V, § 18; 20 MoPrac. §10:60, p. 367.* Competent evidence is evidence that is admissible, that is relevant to an issue in a given proceeding. *Black's Law Dictionary, Seventh Edition (1999) – admissible evidence, relevant evidence; City of Kansas City v. New York-Kansas Bldg*, 96 S.W.3d 846, 861 (*Mo. App. 2001*); *State v. Kidd*, 990 S.W.2d 175, 180 (*Mo.App. 1999*). Substantial evidence is evidence that a reasonable mind would accept as adequate to support a conclusion; evidence beyond a scintilla. *Black's Law Dictionary, Seventh Edition (1999) – substantial evidence.* Substantial evidence is evidence that if true has probative force upon the issues and from which the trier of facts can reasonably decide a case. *George v. McLuckie*, 227 S.W.3d 503 (*Mo.App.W.D. 2007*); *Brown v. Bailey*, 210 S.W.3d 397, (*Mo.App.E.D. 2006*); *Preston v. Director of Revenue*, 202 S.W.3d 608 (*Mo. 2006*).

SCIENTIFIC EVIDENCE

The term "scientific evidence" is not defined in §444.765 or 10 CSR 40-100. Therefore, the ordinary usage of the word "scientific" must be applied in this case. Scientific – of or dealing with science, based on, or using, the principles and methods of science, done according to methods gained by training and experience. Science – original knowledge, systematized

knowledge derived from observation, study and experimentation. Scientific evidence encompasses opinions of an expert based upon facts or data of a type reasonably relied upon by experts in the field in forming opinions or inferences upon the subject and must be otherwise reliable. Scientific evidence may also include the facts or data underlying recognized studies and the resulting conclusions from such studies. *Section 490.065, RSMo; State Board of Registration for the Healing Arts v. McDonagh*, 123 S.W.3d 146 (Mo. SC. 2004); *Courtroom Handbook on Missouri Evidence*, Wm. A. Schroeder, Sections 702-505, pp. 325-350; *Wulfin v. Kansas City Southern Industries, Inc.*, 842 S.W.2d 133 (Mo. App. E.D. 1992).

HEALTH, SAFETY AND LIVELIHOOD ISSUES

Specific Burden of Proof on Health, Safety or Livelihood

By statute and regulation, Petitioners have a specific burden of proof related to establishing an impact on health, safety or livelihood. Section 444.773.4 RSMo establishes a standard of “competent and substantial scientific evidence, ... that an interested party’s health, safety or livelihood will be unduly impaired by the issuance of the permit.” This statutory standard is further delineated in 10 CSR 40-10.080.

“The impact to the petitioner’s health, safety, and livelihood must be within the authority of any environmental law or regulation administered by the Missouri Department of Natural Resources.” *10 CSR 40-10.080(2)(B)*.

“The burden of establishing an issue of fact regarding the impact, if any, of the permitted activity on a hearing petitioner’s health, safety or livelihood shall be on that petitioner by competent and substantial scientific evidence on the record.” *10 CSR 40-10.080(3)(B)*.

“If the commission finds, based upon competent and substantial scientific evidence on the record, that a hearing petitioner’s health, safety or livelihood will be unduly impaired by impacts from activities that the recommended mining permit authorizes, the commission may deny the permit.” *10 CSR 40-10.080(3)(D)*.

Individual Petitioners

Introduction

It is certainly understandable that individuals living or owning property in close proximity to the quarry that would operate under the expansion of permit # 0086 have a variety

of concerns of how the existence of the quarry would impact their lives and property. However, the Commission is bound by the statutory and regulatory standards that establish the basis for denying the permit. The Commission may only deny the expansion of the Magruder permit upon findings consistent with the burden of proof established by the controlling statutes and regulations. The Commission does not have the prerogative to ignore the burden of proof standard laid down and deny the permit based simply upon concerns of individual petitioners. There must be competent scientific evidence that moves a concern to an undue impairment impacting upon health, safety or livelihood of the petitioner. As is discussed below, the evidence received on the record from the Individual Petitioners did not cross the required threshold for denial of the expansion of the permit.

Michael & Jacqueline Atkisson

Mr. Atkisson's testimony did not constitute expert or scientific evidence on the proposed Magruder quarry operation and its potential impact upon the Atkisson's development. There was no scientific evidence addressing the noise level from blasting which might reach the development. There was no evidence establishing the extent, if any, to which the livelihood of the Atkissons might be impaired or impacted by the operation of the quarry. The matters of noise pollution, traffic, dust outside the mining site, blasting activities, property devaluation and potential impact on businesses in the area where the quarry will be located do not fall under any statutes or regulations administered by DNR. *10 CSR 40-10;080(2)(B)*; **Order on Collateral Issues**, 1/28/08. Therefore, such concerns do not form a basis under the controlling statutes and regulations to deny the expansion of the Magruder permit. No scientific evidence was presented establishing that dust from the quarry would disburse or migrate onto the Atkisson development.

These Petitioners' argued there would be an undue impact on their livelihood from the quarry operation. However, Petitioners never establish what sources of income constituted their livelihood. It was never proven that Petitioners' only source of income was from the sale of lots in their development. Potential property devaluation does not constitute a basis for the denial of the expansion of the Magruder permit.

Mr. Atkisson did testify as to the operation of a business such a distance from the quarry that it cannot possibly be impacted by quarry operations. The only impact on this business was based on the pure speculation that the operation of the quarry would unduly harm the safe operation of the sewer plan or the safety of the sewer lines crossing the Magruder property.

Joseph Bax

Mr. Bax's testimony did not constitute expert or scientific evidence to establish that a break in the Osage Beach sewer line was likely to occur as a result of the operation of the quarry. There was no scientific evidence to support a conclusion that if a break were to occur there would be any leaching of sewage into the water table resulting in pollution of the petitioner's well. To so conclude would be mere speculation. Increased truck traffic on Woodriver Road is not a factor coming within statutes or regulations administered by DNR. Therefore it does not form a basis for denial of the Magruder application. *10 CSR 40-10;080(2)(B)*; **Order on Collateral Issues**, 1/28/08.

Steve & Teresa Beeny

Mr. Beeny's testimony did not constitute expert or scientific evidence establishing that dust from the quarry would disburse or migrate onto the Petitioners' property. Potential safety issues from increased truck traffic on Woodriver Road and potential dust from such traffic are not factors coming within statutes or regulations administered by DNR. Therefore they do not form a basis for denial of the Magruder application. *10 CSR 40-10;080(2)(B)*; **Order on Collateral Issues**, 1/28/08.

Mary Denton

Ms. Denton's testimony did not constitute expert or scientific evidence establishing that dust from the quarry would disburse or migrate onto the Petitioners' property. The letter from Ms. Denton's doctor that was permitted into evidence failed to establish that the opinion of the physician was based upon any personal knowledge relating to the operation of the quarry proposed on the Magruder site. There was no evidence which established that dust from truck traffic from operation of the quarry would disburse or migrate to Ms. Denton's home.

Potential safety issues from increased truck traffic on Woodriver Road and potential dust from such traffic are not factors coming within statutes or regulations administered by DNR. Therefore they do not form a basis for denial of the Magruder application. *10 CSR 40-10;080(2)(B)*; **Order on Collateral Issues**, 1/28/08.

Larry & Vicky Stockman

Location of Riverview visa via Proposed Quarry

Riverview is located on the Osage River at an approximate elevation of 613 feet above sea level. To the Southeast of the Park rises a ridge which crests at an elevation of 787 feet. The floor of the quarry, where most of the machinery used in the daily quarrying would be located,

will be at an estimated elevation of 613 feet. The ridge to the Southeast of the Park is a natural barrier of more than 170 feet in elevation between Riverview and the proposed quarry. The direct distance from the nearest corner of the Magruder property to Riverview RV Park is approximately six-tenths of a mile. The direct distance from the RV Park to the area where quarrying is to begin in Bowlin Hollow would be closer to a mile. *App. Exhibit 7 – Topographical Map*. It is projected it will be 30 years or more before the quarrying operation will reach its closest point to the location of the RV Park (*6/10's of a mile*).

Claims of Dust and Noise Migration

Mrs. Stockman's testimony did not constitute expert or scientific evidence establishing that dust from the quarry would migrate onto the Petitioners' property. No evidence was presented upon which a conclusion can be made that dust from the quarry operations will migrate over the xx foot dividing ridge between the two properties and impact the RV Park. There was no scientific evidence addressing the noise level from blasting or machinery at the quarry, if any, that would reach the Stockman property.

Matters of blasting noise, truck traffic and road dust do not fall under any statutes or regulations administered by DNR. *10 CSR 40-10;080(2)(B)*; **Order on Collateral Issues, 1/28/08**. Therefore, such concerns do not form a basis under the controlling statutes and regulations to deny the expansion of the Magruder permit.

There was no scientific evidence presented on behalf of Petitioners' Stockman to establish that a break in the Osage Beach sewer line was likely to occur as a result of the operation of the quarry. Assuming, but not finding, that if such a break did occur, there was no scientific evidence establishing the extent, if any, to which the Stockman's livelihood might be impaired or impacted by such a hypothetical event.

Trailer Life Directory Evidence

The testimony provided by Mrs. Stockman with regard to the ranking of Riverview RV Park did not constitute scientific evidence on the issue of an undue impairment impacting livelihood. Exhibit MP 3 is a copy of the cover page of the 2007 Trailer Life Directory and pages 1, 12, 849 and two unnumbered pages. Page 849 shows that Riverview RV Park had a "Good Sam Club" rating of 8.5, 9 and 8.5 in the 2007 Directory.

Rating System

The three ratings are for the three categories of Completeness of Facilities, Cleanliness and Physical Characteristics of Restrooms and Showers, and Visual Appearance and Environmental Quality. There are ten (10) elements in each of the categories upon which a recreation park is rated. A facility is given 0 point, a ½ point or 1 point for each element. A park must have at least 5 points in each category to qualify for Good Sam Park Membership. *Exhibit MP 3*. The first two categories are not relevant with regard to potential impact on the Stockman's livelihood from the operation of the Magruder Quarry. Within the factor of Visual Appearance and Environmental Quality there are only two of the ten elements that Mrs. Stockman believed would be negatively impacted by the operation of the quarry. These two elements were Noise and Park Setting.

Noise Element

With regard to the element of the Noise of the park, 0 points would be given if the "Park is located in the flight plan of a nearby major airport or active military airstrip, borders on active railroad track, heavily traveled major highway or industrial area which results in frequent, major noise pollution." A half point would be awarded if the "Park is close enough to interstates, highways, airports, railroad tracks or industrial areas to present some noise distraction." A full point would be given if the "Park is distant enough from airports, railroad tracks, interstates or other heavily traveled highways or industrial areas as to be relatively free from the noise such facilities generate." *Exhibit MP 3*.

Park Setting

The element of Park Setting provides that no points are to be given if the "Park provides no insulation from unpleasant or commercial, industrial or residential surroundings." A half point is given if the "Park is partially insulated from unpleasant or commercial, industrial or residential surroundings." If the "Park and sites are well insulated from unpleasant or commercial, industrial or residential surroundings or located in a natural setting," it receives one point.

Riverview RV Noise and Park Setting Rating

Mrs. Stockman did not provide the specific information as to what Riverview received for these elements in 2007. Nor did she provide a listing of the ratings for the Visual Appearance/Environmental Quality category for the prior years for Riverview when the APAC

quarry was operating directly across the Osage River from the park. Her testimony was that for the Visual Appearance/Environmental Quality Category she thought that the rating was a seven and a half or eight. *Tr-3/24: 117:7-22*. Assuming that the lower rating was due entirely to the operation of the APAC quarry across the river, then there may have been a reduction of a point to half point for the Noise and Park Setting elements.

Conclusion

When an examination of the Noise and Park Setting elements and the definitions put forth in Trailer Life Directory are made with regard to the proposed Magruder Quarry it defies logic to see how its operation would have a greater impact on the Riverview RV Park than the APAC Quarry did. Common sense would lead one to believe the Magruder Quarry would have far less, if any, impact from the elements of Noise and Park Setting on Riverview.

No Evidence of Noise Pollution from Quarry

Considering the element of Noise first, there is no scientific evidence to establish that any of the noise of the blasting at the quarry, much less the operation of machinery, would be detected at Riverview. No scientific evidence was provided from which it can be concluded that any noise from the quarry would result in “frequent, major noise pollution,” for Riverview. Likewise there is no evidence to support a finding that there would even be “some noise distraction,” caused by the quarry. Given the distance of six-tenths of a mile that separates Riverview from the proposed quarry site and the natural barrier existing between the site and the park, it would appear reasonable to conclude the Riverview would be “relatively free from the noise” of the quarry. It appears much more likely that the constant traffic noise from Highway 54, immediately to the West of Riverview would drown out any noise from the quarry.

No Evidence That The Quarry Presents Unpleasant Surroundings

Like the conclusions reached concerning the Noise element, the critical factors of distance and the natural barrier of the ridge defeat any argument that the Park Setting element of Riverview could possibly be impacted in a negative manner by the operation of a quarry that cannot be seen from the Park. Even if a guest at Riverview were to take a hike up the road to the top of the ridge separating the Park from the quarry, it is not possible to view the quarry. Riverview is very well insulated by a natural barrier and dense Ozark woodlands from the proposed quarry. The factors of a former quarry directly North of Riverview and a major four

lane highway adjoining Riverview on the West present much more unpleasant surroundings than a quarry which cannot be seen.

There is no scientific evidence in the record to establish that the operation of the proposed quarry will unduly impair the health, safety or livelihood of Mr. and Mrs. Stockman.

Robert Zawislak

Mr. Zawislak's testimony did not constitute expert or scientific evidence establishing that dust from the quarry would migrate onto the Petitioner's property thereby impacting his woodworking and finishing business. Factors of truck traffic and road dust do not fall under any statutes or regulations administered by DNR. *10 CSR 40-10.080(2)(B)*; **Order on Collateral Issues**, 1/28/08. Therefore, such concerns do not form a basis under the controlling statutes and regulations to deny the expansion of the Magruder permit.

***Petitioners Donald Baker, Jack & Barbara Farris, Joyce Mace,
Clinton & Tamira Sheppard, Judy Taylor, Carl Williams, John Williams
Andrew Zawislak, John & Mariline Zawislak***

This group of Individual Petitioners neither testified nor presented any evidence in support of a claim that their health, safety or livelihood would be unduly impaired by the approval of Magruder's Application for Expansion of Permit # 0086. It is assumed the concerns regarding health and safety due to traffic and dust on Woodriver Road testified to by other Individual Petitioners covered the nature of the concerns held by these Individual Petitioners. The issues of increased traffic and dust on Woodriver Road are not within the authority of any environmental law or regulation administered by the Missouri Department of Natural Resources." *10 CSR 40-10.080(2)(B)*. Therefore, these concerns are not a basis upon which the Commission can deny Magruder's application for expansion.

Summary – Individual Petitioners

Individually and collectively the individual petitioners have concerns as to the impact the quarry operation will have on their properties, their health, safety and in some instances livelihood. Concerns do not equate to scientific evidence. There was no evidence upon which it can be concluded that dust will migrate onto any of the Individual Petitioners' properties. Matters relating to increased traffic and dust on Woodriver Road and speculated loss in property values due to the operation of the quarry are not matters coming under the authority of any environmental law or regulation administered by the Missouri Department of Natural Resources. These items cannot therefore serve as a basis for denial of the expansion of the permit.

Conclusion – Individual Petitioners

The mandate of the controlling regulation is clear. “The burden of establishing an issue of fact regarding the impact, if any, of the permitted activity on a hearing petitioner’s health, safety or livelihood shall be on that petitioner by competent and substantial scientific evidence on the record.” 10 CSR 40-10.080(3)(B) It is this standard the Commission must apply to the evidence tendered by the individual petitioners. The testimony and exhibits provided in support of the concerns of the individual petitioners fails the evidentiary test. The individual petitioners did not meet their burden of proof. Therefore, the requisite basis for the Commission to deny the application does not exist. 10 CSR 40-10.080(3)(D)

Petitioner Joint Sewer Board *Fact Witnesses – Sunrise Beach*

Alfred Bisogno

The testimony provided by Mr. Bisogno was never tied by a sufficient time frame to establish that the damage of which he testified was experienced during the time after approximately mid-2007 when by his testimony Magruder took over the operation of the Sunrise Beach Quarry. A proper evidentiary foundation was never laid to establish the relevance of this witness’s testimony to the operation of the proposed quarry that is the subject of the application for expansion of the permit. The testimony of Mr. Bisogno was irrelevant to establish in any form or fashion any potential undue impairment to the health, safety or livelihood of any petitioner in this proceeding. None of Mr. Bisogno’s testimony consisted of competent and substantial scientific evidence that the operation of the Bowlin Hollow Quarry would unduly impair the safety of either the sewage treatment plant or the two force main lines crossing the Magruder property. 10 CSR 40-10.080(3)(B) &(D)

Joyce Sallach

Ms. Sallach did not lay any foundation as to the time when the broken water line was installed. No evidence was deduced which established that in fact the break in the water line was directly or even indirectly attributable to the blasting operations conducted by Magruder at the Sunrise Beach Quarry. In like manner, the evidence was totally lacking to conclude that basement and foundation cracks were caused as a result of any of Magruder’s blasting. Although, Ms. Sallach testified she purchased the home in January 2006, she never established

the age of the structure, when it was constructed, the basement and foundation poured, and when the water line was laid. The testimony of Ms. Sallach was irrelevant to establish in any form or fashion any potential undue impairment to the health, safety or livelihood of any petitioner in this proceeding. None of Ms. Sallach's testimony consisted of competent and substantial scientific evidence that the operation of the Bowlin Hollow Quarry would unduly impair the safety of either the sewage treatment plant or the two force main lines crossing the Magruder property. *10 CSR 40-10.080(3)(B) &(D)*

Barbara Jean Robinson

The testimony of Ms. Robinson was irrelevant to establish in any form or fashion any potential undue impairment to the health, safety or livelihood of any petitioner in this proceeding. None of Ms. Robinson's testimony consisted of competent and substantial scientific evidence that the operation of the Bowlin Hollow Quarry would unduly impair the safety of either the sewage treatment plant or the two force main lines crossing the Magruder property. *10 CSR 40-10.080(3)(B) &(D)*

Conclusion – Sunrise Beach Witnesses

The testimony of the three witnesses concerning the Sunrise Beach Quarry was never tied up in any manner to establish a proper foundation and relevance regarding the expansion of Magruder's permit to quarry the Bowlin Hollow site. The testimony was taken under a continuing objection on those grounds. The objection was well founded. The matters to which the witnesses testified did not establish by competent scientific evidence that the granting of the application would undue impair the health, safety or livelihood of any of the individual petitioners or the Board Petitioner. These witnesses failed to establish a basis upon which the Commission may deny the permit. *10 CSR 40-10.080(3)(B) &(D)* No probative weight can be given to the Sunrise Beach testimony.

Fact Witnesses – Sewer Plant, Sewer Lines & Osage Beach Economy

Richard C. King

Mr. King's testimony as the Public Works Superintendent for Osage Beach, provided an excellent overall description of the Osage Beach Sewer System and its design and operation. However, the testimony relative to potential damage and impact from a break in either of the two

force main lines crossing the Magruder property was founded only upon the supposition that the operation of the Bowlin Hollow Quarry would in fact cause a break. In other words, nothing more than a conjecture, as there were not facts in evidence upon which Mr. King could properly conclude the quarrying would in fact rupture the lines.

The testimony of Mr. King was irrelevant to establish in any form or fashion any potential undue impairment to the health, safety or livelihood of any petitioner in this proceeding. None of Mr. King's testimony consisted of competent and substantial scientific evidence that the operation of the Bowlin Hollow Quarry would unduly impair the safety of either the sewage treatment plant or the two force main lines crossing the Magruder property. *10 CSR 40-10.080(3)(B) &(D)*

Gary F. Hutchcraft

Similar to the testimony of Mr. King, Mr. Hutchcraft provided his description and explanation of the operation of the sewage treatment plant. Again while very informative, it did not establish that that operation of a quarry in Bowlin Hollow would in fact cause damage to the plant. The impact from damage to the plant or its having to temporarily shut down was not at issue. The issue is whether Magruder's operation of the Bowlin Hollow quarry would cause damage or a temporary shut down. Mr. Hutchcraft's testimony did nothing to establish this would occur.

The testimony of Mr. Hutchcraft was irrelevant to establish in any form or fashion any potential undue impairment to the health, safety or livelihood of any petitioner in this proceeding. None of Mr. King's testimony consisted of competent and substantial scientific evidence that the operation of the Bowlin Hollow Quarry would unduly impair the safety of either the sewage treatment plant or the two force main lines crossing the Magruder property. *10 CSR 40-10.080(3)(B) &(D)*

Greg Gognan

The testimony provided by Mr. Gognan addressing potential economic impact to the Lake of the Ozarks economy while interesting was hardly a matter at issue. If a break in any part of the miles and miles of sewer line, or a disruption of service at the sewage plant were to occur and result in raw sewage being dumped in the Lack of the Ozarks it would certainly be a negative impact. The extent of such an impact would vary based upon a variety of factors. The sum and substance of Mr. Gognan's testimony could have been addressed in a few sentences in a stipulation of uncontested fact. However, the testimony provided no basis to establish that the

granting of the expansion of the Magruder permit will result in damage to either the sewer plant or the lines crossing the Magruder property.

The testimony of Mr. Gognan was irrelevant to establish in any form or fashion any potential undue impairment to the health, safety or livelihood of any petitioner in this proceeding. None of the witness's testimony consisted of competent and substantial scientific evidence that the operation of the Bowlin Hollow Quarry would unduly impair the safety of either the sewage treatment plant or the two force main lines crossing the Magruder property. *10 CSR 40-10.080(3)(B) &(D)*

Nicholas L. Edelman

In the same vein as the testimony of Mr. King and Mr. Hutchcraft, while Mr. Edelman's testimony provided information relative the sewer mains that cross the Magruder property, he presented no evidence upon which a conclusion could be drawn that the permitted activity would result in damage to either the plant or the mains.

The testimony of Mr. Edelman was irrelevant to establish in any form or fashion any potential undue impairment to the health, safety or livelihood of any petitioner in this proceeding. None of the witness's testimony consisted of competent and substantial scientific evidence that the operation of the Bowlin Hollow Quarry would unduly impair the safety of either the sewage treatment plant or the two force main lines crossing the Magruder property. *10 CSR 40-10.080(3)(B) &(D)*

Penny A. Lyons

As in the case of the other Board Petitioner's fact witnesses, the testimony of Mayor Lyons addressed the potential impact on the Osage Beach economy if the sewer plant had to shut down or the force mains broke. The testimony did not address the actual question of whether the activities from granting the mining permit would result in damage to either the plant or sewer mains.

The testimony of Mayor Lyons was irrelevant to establish in any form or fashion any potential undue impairment to the health, safety or livelihood of any petitioner in this proceeding. None of the witness's testimony consisted of competent and substantial scientific evidence that the operation of the Bowlin Hollow Quarry would unduly impair the safety of either the sewage treatment plant or the two force main lines crossing the Magruder property. *10 CSR 40-10.080(3)(B) &(D)*

Conclusion – Sewer Plant, Lines and Economy Fact Witnesses

The testimony of the Sewer Plant, Sewer Line and Economy fact witnesses was focused on the results of a shutdown of the Plant or a break in the Lines. The testimony assumed a shutdown or a break. It did nothing to establish that quarrying activities in Bowlin Hollow would actually result in a Plant shutdown or a break in the Lines. In other words the proffered evidence missed the point. The question for the Commission to address and decide is not what the results of a shutdown or a break would be. The sole question, with regard to the Board Petitioner, is whether the activities that the recommended mining permit authorizes will unduly impact upon the safety of the plant and the safety of the lines.

The testimony of this group of fact witnesses assumed a shutdown or a line break. In other words, based upon the conjecture that the plant has to shut down or a line breaks what would be the negative impact. Such testimony was based upon speculation that Magruder's operation of the quarry would cause such damage. The testimony itself, from any or from all of the witnesses, did nothing to advance the inquiry as to whether mining of rock as proposed by Magruder would in fact unduly impair the safety of the plant or the lines. These witnesses failed to establish a basis upon which the Commission may deny the permit. *10 CSR 40-10.080(3)(B) &(D)*

Undue Impairment to Safety of Sewer Plant and Sewer Lines Not Proven

The critical safety question in this matter is whether the Board Petitioner presented competent and substantial scientific evidence that the safety of the Joint Sewer Board's Waste Treatment Facility or the safety of the City of Osage Beach's sewer lines would be unduly impaired by the proposed quarry in Bowlin Hollow? The entirety of the Board's case on this point rests on the report (*Exhibit BP-23*), presentation (*Exhibit BP-25*) and testimony of its witness, Donald E. Dressler, PE. A detailed analysis of the conclusions and opinions of Mr. Dressler and the support therefore, or lack thereof, must lead to the determination that Board Petitioner failed to meet its burden of proof under the regulation. *10 CSR 40-10.080(3)(B) & (D)*.

Opinions and conclusions proffered by an expert witness have probative weight to the extent they rest on a proper foundation. Experts always to some degree rely upon the experience developed over years practicing a particular profession. However, for an expert opinion to be of true evidentiary value, it must be derived from facts and data generally relied upon by other

experts in the given field, and must otherwise be reliable. *Section 490.065, RSMo; State Board of Registration for the Healing Arts v. McDonagh*, 123 S.W.3d 146 (Mo. SC. 2004); *Courtroom Handbook on Missouri Evidence*, Wm. A. Schroeder, Sections 702-505, pp. 325-350; *Wulfin v. Kansas City Southern Industries, Inc.*, 842 S.W.2d 133 (Mo. App. E.D. 1992). Tendered opinions failing to rest on proper and persuasive elements are of no substantive benefit.

Zero Tolerance – Vibrations on Sewer Lines

Mr. Dressler's conclusion that the Bowlin Hollow site is not suitable for the development of a quarry rests upon his conclusion that the "sewer mains are considered to have zero tolerance from seismic vibrations." *Exhibit BP-23, p. 2. Emphasis in original.* Based upon this "zero tolerance" factor, Mr. Dressler concluded that the safe distance for blasting was based upon the formula for calculating the scaled distance under the Missouri Blasting Safety Act. *Exhibit BP-23, p. 4.* This conclusion was in error and without any scientific support. See, **Sewer Plant**, *infra*.

Mr. Dressler testified he arrived at his conclusion of zero tolerance for vibrations on ductile iron pipe from a contact with an unnamed engineer with the Ductile Iron Association in Atlanta, Georgia. This unnamed source informed Mr. Dressler that there was no vibration level established for ductile iron by the Association. *6/6 Tr. 269:18-24.* From this Mr. Dressler concluded that the Peak Particle Velocity (*PPV – level of vibrations*) applicable to the ductile iron sewer line from any external source was zero. No data was provided in support of Mr. Dressler's conclusion. The witness cited to no learned treatise on either ductile iron or blasting near pipelines that supported his zero tolerance theory.

The evidence failed to establish that Mr. Dressler had in fact submitted the Worsey blasting plan to the Ductile Iron Association, with its 150 foot buffer from the sewer lines, and inquired as to whether blasting in accordance with the plan would cause damage to the pipe. Nor does the evidence show that Mr. Dressler inquired as to data involving breaks in ductile iron pipes caused from blasting at distances in excess of 150 feet or any other distances. The witness also applied this zero tolerance to the PVC sewer line. *6/6 Tr. 146:14-18.* However, he provided no source for this conclusion or the data upon which he had made this determination.

In the opinion of Mr. Dressler, ductile iron is "a very superior sewer pipe for forced mains." *6/6 Tr. 39:24-25.* This was his opinion in spite of the fact that it was also his conclusion that any PPV greater than zero hitting the ductile iron and the PVC lines would cause damage to

the sewer lines. The witness reiterated again and again his conclusion of zero tolerance, that no vibrations from blasting or any other external source could reach the sewer lines, or else they would be damaged. *6/6 Tr. 52:7-9; 6/6 Tr. 73:16-24; 6/6 Tr. 94:1-4; 6 Tr. 138:2-4*. Mr. Dressler was of the opinion that his zero tolerance standard applied to the sewer lines throughout the City of Osage Beach. *6/6 Tr. 145:6-21*.

Mr. Dressler admitted that his “zero tolerance” standard is not required by any learned treatise. That in his 44 years of blasting and pipeline experience, he has never had a project which required zero tolerance on vibrations. He admitted he knows of no other expert that recognizes his theory of zero tolerance. *6/6 Tr. 143:7-19; Tr.144:16-23*. He further admitted that zero tolerance was not a requirement under the Missouri Blasting Safety Act. *6/6 Tr. 224:16 – Tr. 225:4*.

Finally, by his own testimony, Mr. Dressler contradicted his “zero tolerance” theory. The Highway 54 Expressway project in Osage Beach will require blasting and excavation in close proximity (*40 – 60 feet*) to the sewer lines resulting in external vibrations impacting the lines. Approximately two million tons of rock within approximately 45 feet and at an elevation approximately 85 feet below the ductile iron pipeline that eventually crosses the Magruder property will have to be excavated either by blasting, ripping or chipping or combinations of all three. Mr. Dressler’s own company will be responsible for this excavation. He maintained that his company would somehow “figure out a way” to do all of the excavation within 45 to 85 feet of the ductile iron pipe without causing vibrations. *Exhibit APP-29; 6/6 Tr. 214:5 – Tr. 216:3; 6/6 Tr. 216:15 – Tr. 217:5*. It defies simple logic to think that the projected excavation can take place without any external vibrations from heavy machinery, blasting, ripping or chipping of rock reaching the sewer line only forty some feet away.

Conclusion – Zero Tolerance for Sewer Lines Not Based on Scientific Evidence

The theory advanced by Mr. Dressler of zero tolerance for both the ductile iron and PVC sewer lines is not based upon any facts or data generally relied upon by experts in the field of blasting or pipeline construction. Therefore, it can be given no probative weight. The witness failed to establish by scientific evidence that the subject pipelines have zero tolerance for seismic activity. More importantly, Mr. Dressler provided no data upon which it can be concluded that blasting at distances greater than 150 feet from the sewer lines in accordance with the Worsey blast plan would impair the safety of the sewer lines.

The Dressler “zero tolerance theory” was derived only from information that the Ductile Iron Association had established no standard for vibrations. That cannot reasonably be translated into the zero tolerance theory developed by Mr. Dressler. The theory was not derived from affirmative scientific data showing that the PPV resulting from the size and type of blasts set out in the Worsey blast plan would in fact damage or rupture either of the pipes. Furthermore, the zero tolerance theory was rebutted by Applicant’s blasting experts. *See, APPLICANT’S CASE IN CHIEF, infra.*

Sewer Line Unknown Factors

Petitioners raised a number of questions related to various unknown factors regarding the buried pipelines and their condition. The list of unknown factors included the following: condition of joints, corrosion, fatigue, depth of cover, ground fractures, vibration levels lines can withstand, compaction of ground, backfill material, bedding material, geology of site, sink-in or voids between lines, deflection or bending of the pipes, and large rocks pressing against the pipes. Although, at first glance it might seem that these unknown factors would need to be addressed prior to blasting at the Bowlin Hollow site, the evidence in the record fails to support any such conclusion.

First, it must be observed that Petitioners only raised the question of these unknown factors. The raising of an unknown factor neither establishes that it exists, nor that it is relevant to establish an undue impairment to the safety of the sewer lines. No scientific evidence was presented to establish that any or all of these factors had to be known before blasting occurred around buried pipelines. Simple logic dictates that in any case of a buried pipeline few if any of these unknowns would known. It would be necessary in every instance of blasting in close proximity to buried pipelines to excavate the pipe before blasting. No evidence was presented that established that was standard operating procedure for blasting in close proximity to buried pipelines.

However, one need go no further than the testimony of Board Petitioner’s own witness to conclude that it is not essential to have knowledge of these factors to determine the ability of the pipe to withstand blasting vibrations. By Mr. Dressler’s own admission on projects with which he has been involved, he did not excavate and examine pipelines to establish any of the unknowns asserted by Petitioners in this instance. 6/6 Tr. 172:24 – Tr. 175:25. In point of fact, it was the opinion of Mr. Dressler that the only sure way to determine to make known these

unknown factors was to excavate the pipe, but that should not be done, unless absolutely necessary. 6/6 Tr. 176:1-16. Furthermore, Mr. Mirabelli rebutted the assertion of a need to know about the Petitioners' unknowns, based upon his experience and the distance of blasting from the sewer lines.

Conclusion – Sewer Line Unknown Factors Argument Unpersuasive

The argument that one must know all of the factors put forth in Petitioners' argument was not established by any scientific evidence that this is the standard procedure in the blasting industry when blasting near buried pipelines. There is no way to know any of these matters unless the pipeline is exposed the entire length of the blasting zone. No evidence was provided to establish that is practiced in the industry. The assertions that the list of unknown factors prevented blasting under the Worsey blast plan were rebutted by the various illustrations and case studies referenced in the expert reports and testimony of Dr. Worsey, Mr. Mirabelli and Mr. Henderson. Mr. Dressler's testimony established he has been involved in projects where he did not know all of these factors. He provided no testimony that he always knew these factors in all of his projects. More damaging though to Petitioners' line of argument is the very fact that the blasting and excavation, within forty (40) to eighty-five (85) feet of the Osage Beach ductile iron sewer line along the Highway 54 Expressway will be performed under all of the unknown factors put forth by Petitioners in this matter.

Settling of Bedding Under the Pipelines

Mr. Dressler asserted that blasting under the Worsey Plan may create "continued settling of bedding" resulting in either breaking at joints or bursts in the sewer pipes. *Exhibit BP-25, pp. 13 – 20*. The totality of this claimed problem with the blast plan for Bowlin Hollow is based upon an unsupported conclusion that blast vibrations may increase unsupported areas of the pipe. The argument assumes the existence of "unsupported areas" of the pipes. The speculation as to the settling was based on blasting vibrations and the possibility of underground water running in the bedding and undercutting the sewer pipes.

The total lack of scientific evidence on this point demonstrates how flawed the assertion is. There was no data to establish that in point of fact the existing bedding under the ductile iron or PVC lines had in fact settled and created any voids under the pipes. There was no evidence from which it can be concluded that water has washed away or is washing away bedding under

the sewer lines. There is no evidence that there exist any voids under the floor of the sewer lines excavations which would permit bedding to compact or wash away.

There was no data from any studies of bedding for buried pipelines which concluded that settling of bedding is a problem. No study was presented to establish that ground vibrations at the levels that are calculated to occur under the Worsey blast plan have resulted in settling of bedding in any other instance. No data was brought forth to establish that the Worsey blast plan vibrations would cause a creation of voids under the sewer lines.

The most damning lack of evidence is the simple fact that Mr. Dressler provided not a single instance from his own experience to substantiate what he asserted might happen. The witness made a simple conjecture – the bedding under the pipes has settled and left voids under the pipes. From this, he speculated that vibrations and/or water running underground (*never connected to blasting*) would increase the conjectured voids.

Conclusion – Settling of Bedding Not Established

The speculation offered by Mr. Dressler on this point can be given no probative weight. When a witness recognized as an expert for a given purpose ventures into providing opinions which are not based on actual data, but rest only on what he speculates might be the case, he is not providing expert testimony, nor evidence. Unsubstantiated opinion does not equate to competent and substantial scientific evidence.

Fatigue Fracture

Mr. Dressler also advanced his argument that blasting subjected the pipelines to the possibility of fatigue fracture. 6/6 Tr. 61:24 – Tr. 61:14. Fatigue fracture was demonstrated as a bending back and forth, such as with a paper clip, that would result in a break. Tr. 65:19 – Tr. 66:14. The theory argued by the witness was not supported by any reference to any treatise on blasting near buried pipelines. No supporting study was presented to establish that this is a matter of any concern when blasting at distances greater than 150 feet of buried pipelines. No information was provided by the witness to establish that any other expert in the field of blasting had ever observed the failure of a buried pipeline by fatigue fracture from blast vibrations. In fact no reference to any such phenomena is even mentioned in Exhibit BP-54 – Surface Mine Blasting Near Pressurized Transmission Pipelines.

Conclusion – Fatigue Fracture Not Established

This assertion similar to the settling of bedding finds no basis in fact in the record. It is conjecture that this may occur. Without reported instances and examples of fatigue fracture from blast vibrations in other circumstances, this remains nothing more than speculation. That fatigue fracture would occur from blasting at the levels calculated under the Worsey blast plan was not established by scientific evidence. It is nothing more than theory.

Sewer Plant

The evidence propounded by Mr. Dressler with regard to the safety of the sewer plant is even less compelling than his zero tolerance theory for the sewer pipelines. He presented no scientific data to establish the blasting at the Bowlin Hollow site under the Worsey blast plan would cause any damage to the sewer plant. Mr. Dressler asserts that the plant is “susceptible to long term seismic quarry production” without a shred of scientific evidence to support that conclusion. *Exhibit BP-23, p.5*. No evidence was presented establishing any damage to the sewer plant at peak particle velocities of --- or less.

The entirety of the expert’s conclusion on this point rests upon his scaled distance calculations, which he applied to both the sewer lines and the sewer plant. Mr. Dressler calculated the scaled distance under the Missouri Blasting Safety Act. §319.309 RSMo. He then concluded that this distance (766’ – *dry hole blast*/930’ – *wet hole blast*) was a safe distance, because a seismograph is not required if you stay outside that distance. This implied to Mr. Dressler that keeping this far away from either the sewer plant or sewer lines would be safe. 6/6 *Tr. 46:14 – Tr. 47:10*. In effect, Mr. Dressler was applying his “zero tolerance” theory to the sewer plant also, since he had concluded that if one was beyond the distance required for use of a seismograph then there would be no vibrations to measure. It was his position that the 150’ setback for the sewer lines and a distance of 650 – 700’ from the sewer plant were not in accord with the scaled distance requirement of the Blasting Safety Act. *Exhibit BP-23, pp. 4 & 5*. This demonstrated a total lack of understand of the requirement of the Act and the use of scaled distance.

The problem with the conclusion of the expert on this point is that the calculation of scaled distance has nothing to do with the level of vibrations (*PPIV*) which would impact either the sewer plant or the sewer lines, and whether the level of vibrations would cause damage to either the sewer plan or the lines. Scaled distance has to do with when the use of a seismograph is

required in a blasting operation. However, for operations, such as that proposed by Magruder for Bowlin Hollow, where a seismograph is being used for all blasting, calculation of the scaled distance is not required. §319.309.4 RSMo. The Dressler position on this matter was totally rebutted by the testimony of Dr. Worsey, Mr. Mirabelli and Mr. Henderson. See, **APPLICANT'S CASE IN CHIEF**, *infra*.

Conclusion – Safety of Sewer Plant

The Dressler conclusion concerning the safety of the sewage plant at the best is nothing more than speculation and conjecture. It is not grounded in scientific data. The witness totally ignored the vibrations (*PPV*) requirements of the Missouri Blasting Safety Law as it applies to the Bowlin Hollow quarry operation and the uncontrolled structure of the sewer plant. No probative weight can be given to the Dressler opinion regarding the safety of the sewer plant.

Karst Topography Issue

Mr. Dressler in his report raised the issue of the possible presence of karst features at the Bowlin Hollow site. “Karst is a type of topography that is formed in limestone, gypsum and other rocks by dissolution that is characterized by sinkholes, caves and underground drainage regions.” Potential Environmental Impacts of Quarrying Stone in Karst – A Literature Review, William H. Langer, U. S. Department of Interior, U. S. Geological Survey, 2001 – Exhibit BP-8. Dr. Worsey provide an excellent and detailed explanation of karst topography and an example of actual blasting experience in karst topography during his testimony. 5/23 Tr. 93:2 – Tr. 97:5.

Sources for Dressler Position

The assertion that the site likely contains karst features was based upon Mr. Dressler's position that the Ozarks of Missouri is a karst region. The sources from which this was concluded were two exhibits – Exhibit BP-7 and Exhibit BP-8.

Exhibit BP-7 is a copy of the Minutes of a meeting of the Lake of the Ozarks – LOWA on July 16, 2007. The minutes include a summary of a presentation by James E. Vandike of MDNR Water Resources Center. The presentation was entitled Karst Hydrology in the MO Ozarks. In the minutes the statement – “The Ozarks of Missouri is a karst region” Appears. As a basis for concluding that the Bowlin Hollow site has karst features this document and this statement is totally lacking. The document provides nothing more than a very general statement. It is no more an indictment of the Bowlin Hollow site as a quarry than to observe that the Ozarks of Missouri has oak and hickory trees. Even though Exhibit BP-8 discusses karst topography

and quarrying in great detail and even identifies Missouri as one of a number of states with karst areas, it too totally fails to establish any evidentiary foundation to conclude that the Bowlin Hollow site is of karst topography.

Faulty Logic in the Dressler Conclusion

The apparent logic employed by Mr. Dressler was in the following sequence. The Ozarks of Missouri is a karst region. The Bowlin Hollow site is in the Ozarks, therefore, the Bowlin Hollow site is of karst topography. The logic is totally faulty – a *non sequitur*. It is clearly understood that areas of the Ozarks of Missouri are karst topography. However, it is likewise understood other areas of the Ozarks of Missouri are not karst topography.

The other flaws in the Dressler conclusion that the Bowlin Hollow site is karst, lies in his own testimony. Mr. Dressler, who is not a geologist, and whose knowledge concerning karst apparently came from Exhibits BP – 7 & 8, admitted that he did not observe any surface signs of karst topography at the Magruder site. He further admitted he could find no karst signs at the limestone high wall which is directly south of the sewer plant. 6/6 Tr. 194:2-12. Mr. Dressler failed to identify any karst topography at the APAC quarry site on Highway 54, just across the Osage River, less than a mile to the northwest of the Magruder site. Nor could the witness provide any evidence of karst features in any of the various highway cuts along Highway 54 in the general vicinity of the proposed quarry. It was the position of Mr. Dressler that the proper way to determine whether karst features exist on the Applicant's proposed site would be to perform rock boring.

Failure to Establish Karst Topography Causes Threat

Beyond the flawed reasoning of the Board's witness is the second evidentiary flaw. Nothing provided in the Dressler testimony or the two exhibits presented by the Board provides any scientific basis to conclude that mining in a deposit, if it contained karst features, would unduly impair the safety of either the Board's treatment plan or the Osage Beach sewer lines. Nor was any scientific evidence presented that quarrying in a karst feature location would unduly impair the health, safety or livelihood of any of the individual petitioners.

Failure to Recognize Conclusion Contained in Exhibit BP-8

Mr. Dressler either elected to ignore or was possibly unaware of the conclusion found at page 10 of Exhibit BP-8. The report stated the following: "The technology of rock blasting is highly developed, and when blasting is properly conducted, most environmental impacts should

be negligible. By following widely recognized and well-documented limits on ground motion and air concussion, direct impacts from ground shaking and air concussion can be effectively mitigated.” The blasting that will occur at the Bowlin Hollow site is regulated and under the limits of the Missouri Blasting Safety Act. The reasonable, evidentiary supported conclusion is that even if the Magruder site has karst topography (*which was not established in the record*) quarrying on the site presents no threat to the health, safety or livelihood of any petitioner.

Applicant’s Witnesses Rebut the Dressler Conclusion

Applicant established that in fact borings on site have been done. These were done with two retired State geologists. Approximately ten were done in the general area where quarrying was to begin and some others on the western portion of the tract. 4/29 Tr. 240:3-18; Tr. 32:22 – Tr. 33:15. In addition, Dr. Worsey, a professionally trained geologist, made three site visits, studied rock formations on nearby high walls and road cuts, examined the terrain on site and found no features which would indicate a karst topography for the Bowlin Hollow area. Dr. Worsey further established that karst features simply don’t occur everywhere in limestone. Karst features are not typical everywhere in Missouri where limestone is located. 5/23 Tr. 99:6 – Tr. 101:9. Mr. Henderson provided testimony establishing that even if karst features are encountered in Bowlin Hollow it will not pose any blasting problems. There are corrective measures to be taken in such instances. 6/4 Tr. 195:16 – Tr. 196:6.

Conclusion on Karst Topography Issue

The assertion of Mr. Dressler on this point is speculation. His conclusion has no evidentiary foundation. The evidence on the record rebuts that the Magruder site is karst topography. There is no scientific evidence to establish that even if karst topography is encountered on the site that it would result in undue harm to the health, safety or livelihood of any petitioner. If karst topography is encountered in the proposed operation there are adequate methods to safely mine the rock.

PETITIONERS’ CHALLENGES TO BLAST PLAN

Petitioners (*Individual and Board*) raised various objections and challenges to the mining and blast plan developed by Dr. Worsey. The various objections were essentially conclusions set forth by Mr. Dressler. It is noted at the outset that none of the challenges constitute scientific evidence that the health, safety or livelihood of any individual petitioner or the safety of the sewage treatment plant or the sewer lines would be unduly impaired by the Bowlin Hollow

Quarry operation. Simply because the individual called as an expert witness expressed what he personally believed to be some deficiency in the mining and blast plan tendered by the Applicant does not constitute either scientific or even competent evidence upon which a decision to deny the application for expansion may be denied. *10 CSR 40-10.080(3)(B) & (D)*. Furthermore, a brief review of the objections raised demonstrates they are without merit. Finally, it is to be noted that there exists no statute or regulation which mandated the preparation and submission of a blast plan as part of the application process to the Land Reclamation Program.

Environmental Impact Statement

The first objection raised by Mr. Dressler against the Worsey Blast Plan (*Plan*) was that it was incomplete because it did not contain an environmental impact statement. The objection is without merit. The witness admitted that environmental impact statements are not required by either the Missouri Blasting Safety Act, or the Land Reclamation Act. *6/6 Tr. 234:5-17*. The Plan cannot be incomplete for not containing a document which is not required by the controlling statutes and regulations.

Enforceability

Petitioners assert that because there is no requirement that the Plan be filed with the Land Reclamation Program or any other state or federal agency, it is unenforceable. First the Plan has become a part of the Land Reclamation Program's file as a result of this proceeding. It is now in the records of the Commission. More importantly, the blasting to be carried out at the proposed quarry comes under the enforcement jurisdiction of the Missouri Blasting Safety Act and the State Fire Marshall. The Fire Marshall doesn't need to enforce the Plan, the Blasting Act is the enforcement means to insure that the blasting at the quarry complies with the law. Finally, the Plan will be incorporated by reference in this Order as a special condition. Petitioners' claim on this point is not well taken.

Modification of the Plan

Another challenge to the Plan was the fact that it could be subject to change depending on the conditions experienced on site. Petitioners attempt to construe the ability to modify the Plan as a deficiency or a negative factor. Their objection lacks any merit. The purpose of being able to modify the Plan during the projected years of mining is to insure that the blasting is conducted in a safe and appropriate manner consisted with the actual conditions which may be encountered.

Even Mr. Dressler concurred that it is essential to allow for modifications in blast plans based upon the conditions at the site. Furthermore, the Petitioner's expert agreed that the blast plans that he drafts allow for revisions and changes. He always reserves the right to change his blast plans. 6/6 Tr. 163: 21 – Tr. 164:12; Tr.186:22 – Tr. 187:2. It is inconceivable to understand why the ability to modify the Worsey blast plan should be considered as an inadequacy, when it is standard operating procedure in the Dressler plans. This challenge lacks any basis to be given reasonable consideration. Common sense allows for plan modifications to insure safe blasting and operation of the quarry.

Use of Seismographs

The next objection posited by Mr. Dressler was that the Plan was inadequate because it calls for the use of seismographs to monitor the blast vibrations and monitoring the blast vibrations won't prevent damage. The say the least, this challenge flies in the face of the law which now controls blasting in Missouri. Nowhere in the Worsey plan is it asserted that the use of a seismograph controls blast vibrations. The peak particle velocity generated by a blast is controlled by the blasting material, not by the existence of a seismograph. That is understood by blasting experts and should be by most lay persons with even a passing knowledge of what a seismograph is does.

Essentially, Mr. Dressler and Petitioners argued that a seismograph will not would not report a rupture in the pipelines or do anything to stop sewage from running into the Osage River. 6/6 Tr. 78:4-10. Such a point is irrelevant to the use of seismographs in relation to the operation of the proposed quarry. No such claim is made in the Plan. In this instance, like in the area of plan modifications, Mr. Dressler testified that his company requires the use of seismographs. 6/6 Tr. 1756:17 – Tr. 177:3. However, he asserts that the Worsey Plan is inadequate for its use of them. The inconsistency in the Dressler position on this point pushes this challenge to the edge of the absurd. Mr. Dressler readily admitted that the use of seismographs is the best means to monitor vibrations to ascertain if the vibration levels have a potential to cause damage. 6/6 Tr.177:4-11. He likewise concurred that under the Blasting Safety Act seismographs are the most accrual way to know peak particle velocity and the potential for harm from blasting. 6/6 Tr. 189:5-10.

This claimed objection lacks any merit as an alleged deficiency in the Worsey Plan.

Third Party Seismograph Monitor

Related to the forgoing challenge to the use of seismographs in the Plan is the assertion that the use of a company hired and paid for by Applicant for collection and reporting of seismic data would be erroneous. This objection was nothing more than Mr. Dressler's unfounded personal opinion. The only alternative would be for Magruder to collect the data itself. Not a shred of evidence was presented to indicate that such a practice was in any manner contrary to what was actually done in the blasting industry. Nor was any evidence presented by Petitioners that collection of seismic data by a party other than the mining operator would compromise or flaw the data. The use of a third party monitor provides an unbiased analysis of the seismic data. It utilizes experts for this important function. 5/23 Tr. 155:12 – Tr. 156:10; 6/4 Tr. 186:21 – Tr. 187:5.

This objection had no evidentiary support and therefore no basis in fact. It is not well taken.

Third Party Blaster

Mr. Dressler next objected to the Plan because it calls for a third party – Dyno Nobel – to conduct the blasting at the Bowlin Hollow quarry. He presented no supporting information to demonstrate that use of a third party blaster somehow violated industry standards or was contrary to the Blasting Safety Act. Petitioners also during the course of the hearings questioned the qualifications of Applicant's personnel to properly handle blasting if Dyno Nobel did not perform the blasting. This objection is totally unfounded and unwarranted. Pursuant to the Blasting Safety Act all blasts must be conducted and supervised by a licensed blaster. No evidence was tendered to establish that licensed blasters for Dyno Nobel or Applicant were unqualified to follow the blasting plan. In like manner, Petitioner's argument relative to no existing contract between Magruder and Dyno Nobel is of no consequence in this matter.

Starting Point for Quarrying

The final argument against the Plan was that the Applicant is free to begin quarrying at any location within the mine plan area. Not only is the claim contrary to the designation in the Plan, but it flies in the face of sound logic as to the place to start quarrying operations. In fact this challenge by the Petitioners is refuted by none other than their own expert. Mr. Dressler confirmed that the starting point designated in the Plan is the only reasonable place to begin mining. He went on to confirm that under his own analysis the starting point called for in the

Plan was so far away from the sewer plant and the sewer lines that it would not have any significance on either of them. 6/6 Tr. 191:25 – Tr. 192: 13. The designer of the Plan – Dr. Worsey – testified that the starting point for blasting in the Plan is the only logical place to start. 5/23 Tr. 109:12-22. Petitioners’ objection on this point is based on sheer speculation and conjecture, and is refuted by Petitioners’ only expert. It is not well taken.

Conclusion on Objections to Blast Plan

The seven objections or challenges raised by Petitioners against the Worsey blast plan have no relevance as competent and substantial scientific evidence that the health, safety or livelihood of any petitioner would be unduly impaired by the approval of the application for expansion of permit # 0086.

PATTERN OF NONCOMPLIANCE ISSUE

Specific Burden on Pattern of Noncompliance

Section 444.773.4 RSMo establishes the burden of proof on claims of a pattern of noncompliance by an applicant. The section provides as follows:

“If the commission finds, based upon competent and substantial scientific evidence on the record, that the operator has demonstrated, during the five-year period immediately preceding the date of the permit application, a pattern of noncompliance at other locations in Missouri that suggests a reasonably likelihood of future acts of noncompliance, the commission may deny such permit. In determining whether a reasonably likelihood of noncompliance will exist in the future, the commission may look to past acts of noncompliance in Missouri, but only to the extent they suggest a reasonable likelihood of future acts of noncompliance. Such past acts of noncompliance in Missouri, in and of themselves, are an insufficient basis to suggest a reasonable likelihood of future acts of noncompliance. In addition, *such past acts shall not be used as a basis to suggest a reasonable likelihood of future acts of noncompliance unless the noncompliance has caused or has the potential to cause, a risk to human health or to the environment, or has caused or has potential to cause pollution, or was knowingly committed, or is defined by the United States Environmental Protection Agency as other than minor.* If a hearing petitioner or the commission demonstrates either present acts of noncompliance or a reasonable likelihood that the permit seeker or the operations of associated persons or corporations in Missouri will be in noncompliance in the future, such a showing will satisfy the noncompliance requirement in this subsection. In addition, *such basis must be developed by multiple noncompliances of any environmental law administered by the Missouri department of natural resources at any single facility in Missouri that resulted in harm to the environment or impaired the health, safety or*

livelihood of persons outside the facility.” See also, 10 CSR 40-10.080(3)(B), (E) & (F). (Emphasis Added)

Criteria for Denial of Permit

Petitioners bear the burden of meeting the standard set forth by statute and regulation on this issue. In order for past acts of noncompliance to be used as a basis to suggest a reasonable likelihood of future noncompliance the acts must fall within the following criteria: (1) caused pollution, or (2) had the potential to cause pollution, or (3) was knowingly committed, or (4) act defined as other than minor by the U.S. E.P.A., and (5) must be multiple noncompliances of environmental laws administered by MDNR that (a) resulted in harm to the environment or (b) impaired the health, safety or livelihood of persons outside the facility. Past acts of noncompliance by Magruder failing to come within these parameters cannot provide the basis for denial of the expansion permit. It is the position of the MDNR that in determining a history of non-compliance or pattern of noncompliance that the LRP looks at notice of violations. 4/28 Tr. 234:10-14.

Magruder’s Past Acts of Noncompliance

The past acts of noncompliance, by Magruder, during the period from April 18, 2002 to April 18, 2007 are as follows:

1. 6/26/02 – 2415SL – Troy Facility – Regulation 6.065 – Operating Permits – Failure to complete Annual Compliance Certification Report for 2001. *APP-18; RP-1; MP-31*
2. 6/26/02 – 2416SL – Troy Facility – Regulation 6.070 – Excess Emissions, Water Spray Bars not in operation. *APP-18; RP-1; MP-32*
3. 5/6/03 – 2640 SL – Troy Facility – Regulation 6.060 – Haul Roads not watered, dust beyond property line. *APP-18; RP-1; MP-16*
4. 3/10/04 – 2105SL – Troy Facility – Regulation 6.170 – Excess Emissions, lack of water spray control measures. *APP-18; RP-1; MP-26*
5. 4/2/04 – 2111SL – Troy Facility – Regulation 6.220/6.170 – Excess Emissions – water spray bars not in operation. *APP-18; RP-1; MP-21*
6. 4/2/04 – 2112SL – Troy Facility – Regulation 6.060 – Excess Emissions, record keeping and reporting. *APP-18; RP-1; MP-23*
7. 4/2/04 – 2113SL – Troy Facility – Regulations 6.065/3.030 – Failure to amend operating permit, open burning office trash. *APP-18; RP-1; MP-24*

8. 4/12/04 – 0404CJ01 – Troy Facility – Regulation 6.065 – Record keeping and reporting. *APP-18; RP-1; MP-20*
9. 4/13/04 – 2114SL – Troy Facility – Regulation 6.170 – Excess Emissions, dust beyond property line. *APP-18; RP-1; MP-22*
10. 2/3/05 – 25BN1Ap – Silex Facility – Regulation 6.065 – Operating permit out of date. *APP-18; RP-1; MP-34*

Applying Criteria to Acts of Noncompliance

Applying the required criteria to the ten acts of noncompliance established in the record, established the following:

Criterion 1 – Caused Pollution. Acts 1, 7, 8 and 10 were not shown to have caused pollution. Acts 2, 3, 4, 5, 6 and 9 involved excess omissions, some of which migrated beyond the property line. Therefore, some level of pollution may have been created. However, no scientific evidence was provided to establish what, if any, level of pollution the Acts might have created.

Criterion 2 – Potential to Cause Pollution. The evidence failed to demonstrate that Acts 1, 7, 8 and 10 had the potential to cause pollution. Acts 2, 3, 4, 5, 6 and 9 would apparently have had some potential to cause pollution. However, no scientific evidence was provided to establish what, if any, level of potential pollution the Acts might have created.

Criterion 3 – Knowing Committed. The evidence failed to establish that any of the Acts were knowingly committed as an act of noncompliance. The evidence established that in some instances, Magruder was unaware that any act of noncompliance had occurred. In other cases, with regard to the excess omissions, Magruder took steps to correct the situation when notified it was not in compliance.

Criterion 4 – Other than Minor EPA Acts. The evidence failed to establish that any of the Acts were defined as other than minor under EPA standards.

Criterion 5a – Harm to the Environment. Acts 1, 7, 8 and 10 were not shown to have caused harm to the environment. Acts 2, 3, 4, 5, 6 and 9 involved excess omissions, some of which migrated beyond the property line. However, no scientific evidence was introduced upon

which a conclusion could be reached that any of the Acts resulted in a specific harm to the environment or the level or degree of any supposed harm.

Criterion 5b – Impairment of Health, Safety or Livelihood. There was no scientific evidence to establish that any of the Acts impaired the health, safety or livelihood of any persons outside the facility.

Mitigating Circumstances

Of the list of ten acts of noncompliance in the applicable time period, four involving excess emissions occurred from March 10 – April 13 of 2004. These four acts all occurred at a time when the chemical dust suppression system failed, resulting in the excess dust some of which moved beyond the property boundary. 4/29 Tr. 235:19 – Tr.236:9. The total of ten acts of noncompliance occurred over a period of only seven days, out of approximately 5,000 total work days for the covered period at five quarries. 4/29 Tr. 11:5 – Tr. 13:25. This calculates to approximately one Notice of Violation for every 714 work days at the five quarries. The applicable Notices were issued in a 32 month period out of the covered 60 month period. No Notice of Violation was issued in the 26 months prior to the filing of the present application for expansion of the permit.

Conclusion on Pattern of Noncompliance

The evidence failed to demonstrate for the five (5) year period prior to April 18, 2007 a pattern of noncompliance by Magruder as required by the applicable statute and regulations. Therefore, there is no basis to suggest a reasonable likelihood of future acts of noncompliance. The Commission is without a basis to deny the permit based on past acts of noncompliance.

RESPONDENT'S CASE IN CHIEF

Section 640.012 RSMo

Respondent's Burden of Proof

Section 640.012 provides in relevant part, as follows: "In all matters heard by ..., the land reclamation commission in chapter 444, RSMo, ..., the burden of proof shall be upon ... the commission that issued the finding, order, decision or assessment being appealed," In the present matter, Staff Director, Larry P. Coen made his recommendation to the Commission that the Expansion of Permit # 0086 be approved. The Staff Director's recommendation is not a

finding, order or decision of the Commission. There is no burden of proof therefore on Respondent in this matter for either, the health, safety or livelihood or pattern of noncompliance issues.

The evidence presented by Respondent addressed the application process as it related to the Magruder application. The testimony of Mr. Roberts, Mr. Zeaman and Mr. Coen established that under the checklist, practices and policies in place as then understood and applied by LRP when Magruder submitted its application that the application was complete and Magruder complied with the publication of Public Notice as required by applicable regulations. Upon review, after this case was assigned to the Hearing Officer, the LRP determined that Magruder should submit an additional detail map indicating the existence of the Ameren UE and Osage Beach easements. Upon instructions from the LRP, Magruder provided an amended detail map illustrating the existence of the two easements and also showing the bonded portion of the land to be mined that would be reclaimed for development (*Post Mining Land Use*).

Respondent's Exhibit RP – 1 provided the five year history of the Department's history of noncompliance for the Applicant. Respondent provided no evidence addressing the issue of a hearing petitioner's health, safety or livelihood being unduly impaired by impacts from activities that the recommended mining permit authorizes. Respondent provided no testimony that the Magruder, during the period from April 18, 2002 to April 18, 2007, had demonstrated a pattern of noncompliance at other locations in Missouri that suggests a reasonable likelihood of future acts of noncompliance.

APPLICANT'S CASE IN CHIEF

The Applicant did not have the burden to prove that the operation of the proposed quarry will not unduly impair the health, safety or livelihood of the petitioners. Nor did the Applicant bear any burden with regard to claims of noncompliance. *10 CSR 40-10.080(3)(B)* Applicant had the right to offer evidence on either of the issues presented in this proceeding.

Magruder presented the testimony of three experts in blasting to address the particular matters of safety to the Joint Sewer Board's sewage treatment plant and the City of Osage Beach's sewer lines which cross the Magruder property. The conclusions and opinions reached by each of the three experts was based on their own personal and extensive experience, as well as

a review of studies and documents which are recognized and utilized by experts in the field of blasting, in particular blasting in close proximity to pressurized buried pipelines.

Dr. Paul Worsey – Expert Report – Exhibit APP-8

The report and testimony of Dr. Worsey among other things, reviewed the study by the U. S. Bureau of Mines showing that buried structures (*pipelines*) are far more resilient than surface structures. The study (*AMAX*) – Response of Pressurized Pipelines to Production Size Mine Blasting, *Siskind & Stagg, U. S. Bureau of Mines, 9th Annual Symposium on Explosives and Blasting Research, International Society of Explosive Engineers, 1993* – provided sound empirical data relative to levels of PPV striking buried pipelines without causing damage and suggested that buried pipelines are relative resistant to blast vibrations. The 1993 tests involved four welded steel pipes ranging in size from 6 to 20 inches and one 9inch PVC water supply pipe. These were buried and pressurized 250 foot pipeline sections. They were monitored for vibration, strain, and internal pressure for a period of six months while the production blasting advanced up to the pipeline field. *Exhibit APP 8, pp. 19-23.*

A comparison of the AMAX blasting and the Magruder mine plan blasting establishes the following important comparisons. The AMAX blasting was with 12 inch diameter blast holes, using 2000 lbs plus per delay at a minimum distance of less than 100 feet. This compares to the Magruder blasting which will be only 4 inch blast holes, with less than 200 to less than 300 lbs per delay (*dry or wet hole*) at 150 foot distances. In actuality, because the rock fact that is 150 feet from the pipelines only extends to a height of 25 feet, the closest Magruder blast will use less than 100 – 150 lbs per delay. Therefore, the AMAX blasting was in excess of 13 to 20 times greater than the closest blast to the sewer lines will be at Bowlin Hollow, but resulted in no damage to the pipelines.

It is understood that the AMAX project did not involve testing a ductile iron section of pipe. However, there is no evidence in the record from which it can be concluded that ductile iron would not be able to withstand the much lower blasts in Bowlin Hollow without any damage. In other words, no evidence was adduced to establish that in fact ductile iron is 13 to 20 times weaker than welded steel. More importantly, the AMEX project demonstrated that the PVC line did withstand 13 to 20 times the blast that will be generated in Bowlin Hollow without damage. Since the PVC line survived these much greater blasts without damage, it is impossible to conclude that ductile iron pipe does not have at least the strength of PVC pipe.

Larry Mirabelli – Expert Report – Exhibit APP-9

Mr. Mirabelli in his report and testimony provided details of a number of actual blasting operations in proximities closer than will occur the Bowlin Hollow quarry to either the Osage Beach sewer lines or the Joint Board treatment plant. The illustrations provided in the Mirabelli report consisted of construction blasting along existing pipelines to install new parallel pipelines. Therefore, the blasting involved trench blasting at various offset distances from the buried pressurized and operating pipelines. The It is recognized this is not the exact scenario that will exist in Bowlin Hollow. However, the important data derived from the various projects is the size of the blasts, the distances and the PPVs in comparison to what will occur on the Magruder project. All of the illustrations addressed by Mr. Mirabelli demonstrate significantly larger blasts, significantly closer to the buried pipeline, with greater PPV than the Magruder quarry will create. Another very important factor is that the case studies all involved blasts below ground, at and below the level of the adjoining buried pipelines. In the case of the Bowlin Hollow operation the blasting will never be either at or below the level of the pipelines.

Case Studies

Bowlin Hollow Quarry: Closest distance to pipelines: 150 feet; Maximum explosive at 150 distance: < 100 lbs - < 200 lbs (*per delay*) – 25 foot hole; Maximum PPV: 1.8 – 2.45 – 25 foot hole.

1989 – Capacity Restoration Project. An operating 20 inch diameter World War II era pipeline paralleled the construction at an offset distance of only 20 feet. The maximum PPV was 12 ips (*Oriard formula; 5 ips – Bureau of Mines/ Dyno Nobel*).

1992-1993 PGT-PG & E Pipeline Expansion Project. Installing a 42 inch diameter pipeline at an offset of 25 feet from an operating 36 inch diameter pipeline (1963). Maximum PPV 12 ips (*Oriard formula; 5 ips – Bureau of Mines/ Dyno Nobel*). Testing was as close as 7.5 feet without damage to the pipeline. PPV at surface directly above the pipeline was 2.7 times that measured on the pipeline.

1992-1993 PGT-PG & E Pipeline Expansion Project. Final Proof Test. Four Blasts of lengths of 75, 7000, 3000 and 4000 feet were made without delay between explosive blast holes – instantaneously detonated. The offset distance was 25 feet the explosives per delay were +200 lbs. The calculated PPV was between 50 ips and 150 ips. No damage was done.

2008 Phoenix Expansion Project. Installation of a 42 inch diameter pipeline at an offset of 50 feet from an operating 36 inch diameter pipeline. PPV 2 to 2.5 ips.

Surface Mine Blasting Near Pressurized Transmission Pipelines, D. E. Siskind, 1994, USBM RI 9523. Blasting within 50 feet with PPV 24 ips. No damage to Grade B or better steel pipelines or PVC of SDR 26 or better.

Elimination of Block Motion at the Sewer Lines

The offset distance of 150 feet from the sewer lines at the Bowlin Hollow site eliminates the opportunity for block motion (*shifting of rock*) at the sewer line location. The grade level of the bottom of the blast holes at the Bowlin Hollow site will be above the elevation of the top of the buried sewer lines and this further eliminates any possibility of block motion into the sewer lines. The existence of more relief surfaces at the quarry operation allow fragmented rock to move away from the rock mass resulting in a much lower transmitted ground vibrations and further eliminates the possibility of block motion. The rotation of the blasting pattern 90 degrees and the resulting progression of the blasts directed away from the lines, provides for lower ground vibrations and elimination of possibility of block motion.

Keith Henderson – Expert Report – Exhibit APP-10

Mr. Henderson reviewed the AMAX (*Siskind & Stagg, supra*) study cited above (*Worsey Expert Report*), as well as, illustrations of actual current quarrying operations in Missouri near buried pipelines. A comparison was drawn between the AMAX and Magruder pipelines. AMAX involved steel and PVC covered to a depth of 36", while Magruder will involve ductile iron and PVC buried to 36"+. The differences in the two operations were also noted. The AMAX blasting was done at or below the pipeline level with 12 ¼ inch holes with 41.9 lbs/ft of explosive at a distance from the pipelines of only 48 feet. The Magruder blasting will be conducted above the pipeline level, in only 4" holes, with less than 4.46 lbs/ft of explosive at 150 feet. Mr. Henderson's report noted that in the AMAX tests at the closest blasting to the pipelines (*48 feet*) the PPV reached 25 ips on the surface and 9.2 – 10.8 on the two pipelines with seismographs with no loss of pipe integrity. 6/4 Tr. 217:2 – Tr. 219:7

From Mr. Henderson's experience pipelines are damaged not by vibrations but from block motion (*movement of rock into the pipeline*) or from the pipeline being within the blast crater. He has never heard of vibrations causing damage to pipelines. 6/4 Tr. 189:6-18. The ground displacement or block motion that can occur with the 4 inch blast holes at the Bowlin

Hollow site would be well below 20 feet. Therefore, with a blasting offset distance of 150 feet from the sewer line easement, it is physically impossible for permanent ground displacement or the blast crater to extend either to or beyond the 150 foot distance. 6/4 Tr. 212:9 – Tr. 213:16.

Lodi Quarry Experience

Mr. Henderson testified relative to blasting occurring at the Lodi, Missouri Quarry an approximate distance of 185 feet from the buried pipeline. The blasting was occurring on a level with the pipeline. The blasts were using approximately three times the explosive to be used under the Worsey blast plan. The seismograph readings on the blasts were in a range from 1.48 to 2.44, all well below the 4.92 criteria that was used for these shots. 6/4 Tr. 223:13 – Tr. 227:16. The 4.92 ips PPV standard is the standard recommended by the U. S. Bureau of Mines for blasting in close proximity to buried pipelines.

Structure Response Concrete

Mr. Henderson reviewed relevant and recognized literature on the matter of the vibration limits for concrete. Actual tests established a level of over 100 ips PPV was required to crack 8-day-old concrete and that seasoned concrete could withstand a PPV of 375 ips.

Conclusion – Applicant's Experts

The expert opinions of Applicant's experts, based upon facts and data generally recognized in the field of blasting concluded that the vibrations that will be generated from the Worsey blast plan are not allowed to exceed state limits. The limits provided by the Blasting Safety Act are more restrictive than vibration levels that would damage pipe and such blasting vibrations will not damage the sewer pipe or the concrete sewer basins.

ORDER

IT IS RECOMMENDED by the undersigned, a hearing officer duly appointed by the Land Reclamation Commission of the Missouri Department of Natural Resources, that the Application for Expansion of Permit # 0086 is : (1) denied as to the area in the Application East of the Sewer line easement; and (2) approved for the area West of the Sewer line easement, with the following Special Conditions:

1. **Blasting** – All blasting shall be specifically planned, directed, and monitored by a licensed blaster under the Missouri Blasting Safety Act and shall only be

conducted on weekdays between the hours of 8:00 am and 5:00 pm, Central Standard or Central Daylight Time, as is applicable.

2. **Blasting Distances** – Blasting shall not be conducted closer than 200 linear feet to the nearest easement line of the Osage Beach sewer line easement.
3. **Blast Plan** – Applicant's Blast Plan (*Exhibit APP – 7*) is incorporated by reference as if set out in full in this Order, a copy is attached to this Recommended Order. In the event, modifications of the Blast Plan are deemed necessary by conditions encountered in the mining at the subject quarry, the modifications to the Blast Plan shall be filed with the Land Reclamation Program as part of the file for Permit # 0086.
4. **Seismographs** – Multiple seismographs shall be maintained and operated to monitor the Sewer Treatment Plant and the Sewer Lines. The seismograph records shall be made available to the Joint Sewer Board, the City of Osage Beach for inspection upon reasonable request. The seismograph records shall be made available to the Land Reclamation Program in accordance with any routine or special inspection of the Bowlin Hollow Quarry. An annual report of the seismograph data shall be made to the LRC Program.
5. **Elevation of Mine Floor** – The elevation of the floor of the mine (*quarry*) shall run at or above the grade of the City of Osage Beach's sewer line easement as it crosses the Magruder property, so that no blasting holes will be drilled to a depth that would be below the elevation of that grade.

Any Finding of Fact that is a Conclusion of Law or Decision shall be so deemed. Any Decision that is a Finding of Fact or Conclusion of Law shall be so deemed.

SO ORDERED July 24, 2008.
MISSOURI DEPARTMENT OF NATURAL RESOURCES

(Original Signed by W. B. Tichenor)

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